DIABETES
Greetings,

This Pharmatimes issue delves into the issues of major contributor to non-communicable disease – Diabetes Mellitus in Fiji and the region.

The original article by Drs. Parshu Ram and Ram Raju takes you on a historical journey with the emergence and escalation to epidemic proportions of diabetes, in the last six decades. The genetic pre-disposition of our population of Indian heritage is noted but of even greater concern in how the indigenous population now parallels the incidence and prevalence of the migrant population of Fiji-Indians. As primary healthcare-gatekeepers, the general practitioner have cognition of the social determinants of health and the current health adversities in individuals and communities. One wonders why proactive measures in diet, compliance with increased physicality remain amiss within the preventive health care system and secondly its poor uptake by the communities. The missing link appears to be poor national health literacy, the absence of measures to address those linkages by the healthcare system both in the public health systems; public and private are glaring yet unaddressed.

Additionally, we review the Hippocratic oath in its two versions and ask you to consider your thoughts on its evolutionary changes in the 21st Century. With the COVID-19 pandemic one has opportunity to review some of our basic professional foundations with respect to the Oath. The private-health sector has forged ahead with innovative initiatives in digital health technology some of that is now in question by State parties. The public health care via the government machinery has been challenged. The fragile healthcare system being shaken with delays in policy formulation, executive and bureaucratic hesitancy within the political arena. Programs has been challenged with human resource limitation, supply chain constraints, technology gaps and most importantly markedly contracted Health/GDP ratio. The realization that Universal Health Coverage (UHC) is being challenged, the private sector healthcare system has been selectively requested to service the public in some strategic densely populated areas. However, no monitoring and evaluation of the process is forthcoming by both parties. This is mandatory if unification is to take place by 2030 under UHC.

With the mushrooming of private hospitals, group practices and private diagnostic services we note over-servicing by health-care personnel in these hard hitting financial times.

As primary health care providers, the family physician needs to establish the level of investigations requested. Not everybody with a tummy pain needs intensive care level of tests inclusive of transvaginal ultrasound scans as being done in some facilities in Suva, Nadi and Lautoka. Where has common history taking and clinical examination gone? Increasingly, Iatrogenic disease is also surfacing in our Suva-Nausori corridor with misuse of hormones by general practitioners on grossly obese females. Over-investigated with laboratory and ultrasound scanning but desperately short on consultation and counselling on healthier lifestyles is not a good omen. The Hippocratic Oath needs to be reviewed by our rank and file on all the above matters.

Finally, as your representative on the Fiji Medical and Dental Council (FMDC) kindly ensure your continuing professional development points are collated and sent to the secretariat and the office of the Censor in Chief by 31st Nov 2021. Your college can then only support the progression of your Annual Practicing Certificate on a timely manner.

Season’s Greetings.

Neil Sharma.
Greetings,

The second decade of the 21st Century has arrived, hurray! Globally, Life has been very complicated with the impacts of “Climate Change”, the continued refugee crisis and with civilian and now military unrest in many parts of the world. Fiji has remained docile and aloof despite simmering of political making, yet been impacted by the global political situations and major economic downturn. There are somethings we can live with, but as a highly ranked professional group we need to refocus our collective values.

Poverty is on the rise and so is “aging”. Poverty is on the increase in socio-economic terms and impacts the lives and livelihood of individuals, families and communities. The need to review newer work and life models in our communities, very essential. The impact of poverty on children’s growth and individual development is a cause for major study and medical attention as social determinants responsible for growth and development and how it addresses adversity. More recently an independent gap analyses on Fiji’s national policy on aging (2011 – 2015) was undertaken and contents shared with STATE leaders, both Ministers of Health, Social Welfare, Women and Children, namely.

The Aging policy gap analyze remains an attempt to add value to Healthcare and socio-economic delivery to our people. The contents of the study are in this issue for your perusal and thoughts to consider how best the general practice sector can complement the public health system.

As Fiji’s population shifts with more living beyond the 60-year chronological age, we need to address the quality of health and social responsibilities we all must strive for and deliver. The TISI Sangam project in Nadi is highly commendable in establishing their retirement home designs with the first set of homes designed to go up in 2021. This concept adds value to the states homes which are in need of a major makeover from its present state of disrepair and poor management foresight. Filled to capacity most times, with need to review its daily operations.

How can the G.P sector add value to our aging population collectively is the question. Should we consider philanthropy, health screening, improved care in our practices too? The College executive will Welcome “Letters to the Editor” on this from our members.

Professional interaction has been very limited apart from attendances at mini-seminars and the annual conference. The G.P voice is not being heard, in fact not being verbalized. “Moses” is still collecting the 10 commandments so to speak on Mount Sinai. It’s time to return to the practicalities of loving and giving to the people who have nurtured us in our lifetime. Put you thoughts inter gear!

Seasons, Greetings as we progress to Easter 2022.

Neil Sharma.

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ANSWER TO LAST QUIZ: Malassezia Folliculitis
Diabetes in Fiji in the Twentieth Century Part III: The establishment, activities and achievements of the National Diabetes Centre

Dr. Parshu Ram and Dr. Ram Raju

Summary

The WHO expert committee in 1980 recommended the establishment of special centres in developing countries to promote and integrate care, learning and research in diabetes. The need for such a centre was raised on a number of occasions. With the support of Professor Turtle and the keen interest of the Prime Minister Ratu Sir Kamisese Mara, lead to the establishment of the National Diabetes Centre in 1984.

An old three bedroom medical officer’s quarters at 325 Waimanu Road, opposite the CWM Hospital was extensively and imaginatively renovated by PWD to become the National Diabetes Centre and was developed as a National Training, Education, Resource and Research Centre. The staff were trained in Sydney, Newcastle and Melbourne.

An intensive comprehensive five day National Training Course, and a day long District Seminars as well as education and teaching of undergraduates, postgraduates, general practitioners and regional students were developed and conducted.

Education of diabetics and their relatives was given the highest priority and a large number of educational materials provided by the Centre used extensively. The community education was carried out using all the available means and assisted by the National Diabetes Foundation.

The Centre became a very important Resource for the country. The Centre participated and supervised a number of research projects and contributed extensively to diabetes literature.

Over the years the Centre acquired considerable expertise in the field of diabetes and was frequently requested to provide advisory and consultancy services to regional seminars, workshops, conferences and diabetes activities in regional countries. In 1988 the World Health Organization recommended that the National Diabetes Centre activities extended to an independent National Non-Communicable Diseases Prevention Centre.

The Establishment of the National Diabetes Centre

The WHO expert committee on Diabetes Mellitus in 1980 recommended the establishment of special centres in developing countries to promote and integrate care, learning and research. The centres would constitute the focal point in the national network of diabetes care (Recommendation: WHO Expert Committee on Diabetes Mellitus, Technical Series 646, 1980).

In the WHO sponsored Workshop on Diabetes Control in the South Pacific held in Suva in 1982, the problems of diabetes control in the developing countries were discussed. The absence of diabetic centres in developing countries was a major problem in diabetes control. Such centres should have the responsibility for promotion and integration of diabetic care and for dissemination of knowledge locally. They should provide guidance on and coordinate diabetes related research and be focal points, both in the national health care system and in the international diabetic community, for the control of diabetes (Ram P, In Diabetes Mellitus, Primary Health Care Prevention and Control. IDF publication, 1982).

The need for diabetes centre was raised on a number of occasions (1,2,3). The initial response from the Ministry of Health was less than enthusiastic.

In 1982 a submission was made to the Ministry of Health for an intervention programme against Non-Communicable Diseases with the suggestions:-

“There is a pressing need for a National Non-Communicable Diseases Centre to plan, coordinate and institute preventive measures, a National Diabetes Centre for coordinating diabetic services, and an urgent need to revive Fiji Diabetic Association and the National Heart Foundation. Serious consideration be given to declaring Cardiovascular Diseases and Diabetes as national problems and making appropriate provisions and even subsidies for treatment and prevention of the diseases”.

In the jointly sponsored two day Diabetic seminars by the Ministry of Health, and Lions Club of Ba at Hoodless House, Fiji School of Medicine in Suva and at the Lautoka Hospital and conducted by Professor John Turtle and his diabetes team from Royal Prince Alfred Hospital, Sydney the need for a Diabetic Centre was raised again. With the support from Professor Turtle and his willingness to train staff in diabetes care and the keen interest of the Prime Minister Ratu Sir Kamisese Mara lead to the establishment of the National Diabetes Centre in 1984.

a) Physical location

An old three bedroom medical officer’s quarters at 325 Waimanu Road, opposite the CWM Hospital and close to the Crippled Children’s School (now ka School for Special Education) was selected to be the centre (Fig.1). Extensive renovations were carried out by the Public Works Department to become the National Diabetes Centre (Fig II & III), with a large reception room, a lecture room to accommodate 15 people, four offices/consulting rooms, a kitchen, a library, urine testing area and an area for teaching home glucose monitoring. There was an adequate parking area for the patients, their relatives, visitors and staff. With an increasing activities of the
centre, two additional rooms were added in 1986

Fig. I: Three bedroom medical officers quarters at 325 Waimanu Road, Suva

b) Activities

The planning of the activities of the centre was very important. There were no diabetic centres in the Pacific Island countries. We were unable to obtain information about diabetic centres if any and their approaches to diabetes, from the Caribbean, African or South East Asian countries.

“Technologies and systems cannot be adopted from richer countries but must be adapted to local conditions: indeed emerging countries should be encouraged to work out their own solutions and become self-reliant” (Mahler. H: WHO and the New Economic Order, WHO Chronicles, 30.215, 1976).

In 1980’s and before the bulk of diabetes care and treatment was provided by the diabetic clinics. These tended to be overcrowded with considerable waiting time. The three doctors, two and half hour clinic at the CWM Hospital had to see an average of 110 patients.

The services of dietitian were limited. There were no diabetics educators, printed educational materials and no resource centre. Diabetes education was minimal, offered mainly by the nurses whose considerable time was taken up by teaching urine testing. There were no diabetic updates or refresher courses for health professionals. Diabetes research activities were rare. When necessary junior doctor sought advice on diabetes from two overworked general physicians.

The health administrators had to deal with a large number of infectious, parasitic and nutritional disease and the emerging problems of the non-communicable diseases including diabetes.

The public education, awareness and support was minimal.

With the above status of diabetes care the activities of the centre would need to be realistic, practical and appropriate for local conditions and ensuring that the benefits of such an approach reaches everyone and in particular diabetics in all parts of the country.

It was decided that the initial aims of the Centre should be:

1. To educate the health care professionals, so that diabetics can be provided better and improved care

2. To educate the diabetics, so that they are able to take better care of their condition and hence live a more healthy life and at the same time be able to avoid many of the complications of the disease

3. To educate the public, so that preventive measures are taken to avoid or minimize the risk of the development of the disease in the community

4. To be a resource centre and to provide an expert advisory service on all aspects of the disease

5. To provide guidance on and coordinate and conduct diabetes related research, so that more could be learned about the disease in the country and appropriate prevention measures could be instituted
c) Staff Training

In May 1980 a team of four health care professionals went to Sydney, Australia for a 10 week attachment training programme on Diabetes Education. The team consisted of a senior medical officer, Dr. Margaret Cornelius, two registered nurses, Staff Nurses Lilly Gafoor and Setaita Sevutia and Dietitian, Mrs. Louisa Griffen.

The training programme was planned and conducted mostly by the staff of the Royal Prince Alfred Hospital Diabetes Centre, as well as the staff of the Royal Newcastle Hospital Diabetic Education and Stabilization Centre. The other Diabetes Centres visited during the training programme were at the St. Vincent’s Hospital, the Royal Alexandra Hospital for Children, the Sydney Adventists Hospital, the Royal North Shore Hospital and the Concord Hospital.

Educational visits were made to the Regional Teacher Training College at the University of New South Wales, the School of Podiatry, Ames Company Head Office (the suppliers of Ames glucometers), the Diabetic Unit and the Endocrine Laboratory attached to the Royal Prince Alfred Hospital, the Adolescent Diabetic Clinic of the Royal Alexandra Hospital for Children, the Head Office of the Diabetic Association of the New South Wales and the Lady Davidson Rehabilitation Centre.

The research officer S/N Sereima Rabuku was trained at the Royal Southern Memorial Hospital Membourne in 1986.

The director was appointed in July 1984. Following this approaches were made to the American Diabetes Association, British Diabetes Association, Indian Diabetes Association and to the leading diabetologists in North America, Europe, Asia and Australasia for goodwill, support and assistance. These included:

Dr. Leo Krall, Boston U.S.A, President, International Diabetes Federation (IDF)
Professor J. S. Bajaj, India, President-elect, Internal Diabetes Federation
Professor K. Kosaka, Japan, President, Western Pacific Region, I.D.F
Professor S. Baba, Japan, Secretary-General, Western Pacific Region, I.D.F
Professor Z. Skrabalo, Director, Institute of Diabetes, Zagreb, Yugoslavia
Dr. D. D. Etzwiler, Mineapolis, U.S.A. Vice President, I.D.F
Dr. S. S. Ajgoankar, Bombay, India, Hon. President, I.D.F

The response was overwhelming.

Diabetes Education for Health Care Professionals

In recent years increasing emphasis was being placed on education in the overall control and prevention of diabetes (4). Education was regarded as the most important, most eff-
About 50% of the time was spent on formal lectures and the remaining time on demonstrations, discussions gaining practical skills and visits to the CWM Hospital Kitchen, the Rehabilitation Unit and the Diabetic Sepsis Ward at Tamavua. The participants were encouraged to attend postgraduate activities at the CWM Hospital during lunch time. The participants were from all four major health divisions in the country. The number was limited to 15 per course as this would allow for greater interaction between the participants and the tutors. In selecting participant we ensured that both the public health and clinical sectors were included and efforts were made to have health administrators to attend these courses as well.

Half the number of training courses were reserved for doctors and medical assistants and the other half for nurses and dietitians. Teaching facilities included blackboard, slide and overhead projectors, video tapes, posters, pamphlets and booklets.

The course was conducted by the staff of the Centre, assisted by the staff of the Fiji School of Medicine and the national hospitals in Suva, the CWM Hospital, St. Giles Hospital and the Rehabilitation Unit, Tamavua and in particular surgeons, paediatricians, physiotherapists, psychiatrists, obstetricians and gynecologists, ophthalmologists and consultant in Rehabilitation Medicine. Pre and post course assessment were carried out routinely.

One of the most important and perhaps the highlight of the course was the informal discussion between the participants and the staff of the Centre on the final day. This gave participants to raise any questions on subjects that have been covered or topics that have not been covered and comments, suggestions about improving diabetes control and prevention in the country.

Leading members of the community were invited to officially open these courses and also to address and present certificates (Fig. 1V) at the completion of the training course. The participants were provided with copies of lectures, discussions and other important relevant materials including all the educational materials produced by the Centre.

After completing the course the health professionals were expected to become well versed with and be able to deal with various aspects of diabetes both in the control and prevention and in particular be able:

- to define, understand and gain knowledge in various aspects of diabetes so they can educate the public
- to detect the condition and treat their patients effectively
- to motivate and educate diabetics in self care
- to provide information on diet, medication, exercise, social and other aspects of diabetes and to provide ongoing assistance and support. Need to know when and where to seek assistance
- to be resource person on diabetes and to disseminate knowledge about diabetes to other health professionals, patients, their relatives and the community
- and to meet the community expectations – the patients and the community expects the health workers to be knowledgeable, be thorough in their work, to be readily available, to be humble, be able to inform and educate and be able to understand their feelings

Training of undergraduates of the Fiji School of Medicine and Fiji School of Nursing was undertaken regularly. Periodic lectures were given to paramedics. The education of doctors also included seminars, FMA conferences, C.W.M Hospital postgraduate sessions, Fiji Medical Journal, Science Journal and Fiji General Practitioners. The centre also trained three doctors from the private sector.

The 84 page November – December 1985 issue of the Fiji Medical Journal was the biggest and the largest number of journal ever published, was wholly devoted to diabetes and contained articles on the Classification, Diagnosis, Aetiology, Clinical aspects, Prevention and Control and an annotated bibliography of all published work on diabetes in Fiji and was made available as a reference copy to all medical and paramedical personnel in the country.

The reviewers comment on the issue of the journal was “the articles are well chosen, presented in a logical order and quote recently published references. On behalf of the Vuk Vohvac Institute, I recommend this issue to all diabetologist in the developing countries, who can learn a lot from the experiences of the colleagues in Fiji” (I. Agonovic; Bulletin: Delivery of Health Care for Diabetes in Developing Countries, Yugoslavia, 1985).

Diabetic care was adversely affected by the Military coups in 1987. Following coups there was a mass migration of doctors resulting in the depletion of medical manpower by 33% thus adding more problems to an insufficiently manned health service. This created difficulties in training course for doctors.

**District Seminars**

In 1990 the activities of the National Diabetes Centre were expanded to include District (Subdivisional) Seminars in various parts of the country. These seminars allowed greater number
The aim of education is to motivate and educate the diabetic so that he acquires adequate knowledge and the necessary skills, gains confidence in the management of his condition and thus becomes responsible for his own health and well being. Self care is essential for survival of the diabetic (14).

The Centre had placed very heavy emphasis on the education of diabetics, their relatives and friends. It was one of the major activities of the Centre. Education was offered to all diabetics and their relatives. The patients were referred from the diabetic clinics, hospitals, health centres and general practitioners. A small number were referred from as far as Nadi, Lautoka and Ba and some self-referred.

The education needs of each patient was assessed by specially trained nurse educators and the educational approach was adapted to meet the individual patient’s requirements. Difficulties in education such as lack of motivation, intellectual ability, age, emotional barriers, patients belief and economic factors needed to be dealt with appropriately. Language difficulties were overcome by providing education in patients’ own vernacular language.

The Centre staff provided initial education which included limited general information i.e. what is diabetes, how it affects health, management, monitoring and acute complications. All patients were instructed on diet, exercise and monitoring eg. urine/blood testing and recording. Insulin-dependent diabetics were usually admitted to the adjacent CWM Hospital for stabilization. Their initial education also included insulin injections and the care of syringes.

Some weeks later usually 4-6 weeks, after the initial diagnosis, patients had a programmed in-depth diabetes education. By this time the patient (and their relatives) may have overcome the acute stress, has accepted the diagnosis and would be more receptive to education. This took a total of six to eight hours of education spread over a period of several weeks with each session lasting about 30-45 minutes. The patients’ family and relatives were encouraged to attend these sessions. The evaluation at the completion of the course was routine.

The major topics included in this educational program were:

**What is diabetes**: types, causes, body’s energy needs and processes

**Signs and Symptoms**: how they arise, blood glucose levels, renal threshold

**Management of Diabetes**: diet, exercise, medication, dietary guidelines

**Diet and Food Exchange System**: ideal body weight, calories, advise on alcohol and smoking

**Exercises**: types, advantages, importance in diabetes, relationship to diet and medication, sporting activate

**Diabetes Tablets**: types, actions, indications and use

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**Table II: Health professionals trained from regional countries**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER TRAINED</th>
<th>COUNTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>2</td>
<td>Tonga</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>1988</td>
<td>1</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>1990</td>
<td>4</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>1991</td>
<td>2</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>1992</td>
<td>2</td>
<td>Solomon Islands</td>
</tr>
<tr>
<td>1994</td>
<td>1</td>
<td>Marshall Islands</td>
</tr>
</tbody>
</table>

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**Patient Education**

“A diabetic who knows most about the disease lives the longest” (Joslin) (4)

“Diet and drugs for the diabetic are just like riding on a bicycle. The diabetic has to keep a delicate balance. Exercise adds a third wheel to the therapeutic vehicle, but education alone adds stability, of a four wheeler, in the therapy of diabetes, when the diabetic can participate in the treatment of his disease with confidence” (Ajoankar) (4)

Diabetes education is the most important and essential aspect of the treatment. It can improve the safety of treatment, enhance the quality of metabolic control, increase social and psychological well-being, prevent complication and reduce costs. The education should include patients, relatives and friends (13).

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**The Pharmatimes**

Diabetes in Fiji in the Twentieth Century Part III
The establishment, activities and achievements of the National Diabetes Centre
**Insulin Injections:** types, actions, storage, injection sites, drawing and injection techniques

**Low Blood Sugar Reactions:** definition and symptoms, treatment, causes and prevention

**Sterilization and Care of Needles and Syringes**

**Monitoring Control:** urine testing methods, timing and recording

**Blood Glucose Testing:** timing, methods, advantages and regular visits

**General Health Care:** care of feet, teeth and skin

**Acute Metabolic States:** damage to blood vessels and nerves, importance of good control of diabetes, control of blood pressure, cessation of smoking, low fat diet, regular exercises, periodic checkups of long term complications

**Prevention of Diabetes In Other Members of the Family:** good eating habits, weight control, regular exercise, avoidance of alcohol

Detailed records of these patients were kept in folders. The folders/record cards were specifically designed and donated to the Centre by the Diabetes Education and Stabilization Centre in Newcastle, Australia.

Education was individualized and was on a one to one basis. It was greatly helped by a relatively large number of education materials the centre had produced.

**Community Education in Diabetes**

Community participation is essential in diabetes control and prevention. Community awareness and education can benefit in several ways. As mentioned in WHO publication (13) “Better understanding of diabetes by the community will minimise discrimination against diabetes, and improve social acceptability, can influence local and national government policy regarding the provision of adequate and improved health care services, and act as an effective preventive agency”. It can improve diabetic facilities by direct contributions to diabetic associations, diabetic clinics, diabetes centres, hospitals and health centres, assist diabetic to obtain subsidised drugs and additional funds for developing diabetic training programs for health professionals, patients and the community itself and for diabetes related research.

Education can be provided by health professionals, diabetic clinics and centres and associations, leaders, local community groups, interested individuals and diabetics themselves. All available means of communication from individual discussions to group lectures, from fan mail to printed materials and personal contact to mass media were used (Table. III) for community education. Mass media, radio, newspapers and television are very important and effective means of increasing public awareness on a large scale. The material prepared for awareness should be exact, authoritative, easy to understand and it should not misguide or misinform. The dissemination of knowledge was even more effective if the local language of the people was used.

**Table III: Methods used to increase community awareness and education**

<table>
<thead>
<tr>
<th>Lectures/Discussions</th>
<th>Printed Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Groups</td>
<td>Posters</td>
</tr>
<tr>
<td>Schools/Training Colleges</td>
<td>Pamphlets</td>
</tr>
<tr>
<td>Church Groups</td>
<td>Guidelines</td>
</tr>
<tr>
<td>Women's Clubs</td>
<td>Booklets</td>
</tr>
<tr>
<td>Civil Servants</td>
<td>Medical Journals – Fiji Medical Journal</td>
</tr>
<tr>
<td>Public Lectures</td>
<td>General Practitioners</td>
</tr>
<tr>
<td>Seminars</td>
<td>Science Journal</td>
</tr>
<tr>
<td>Village Health Workers</td>
<td>Diabetes Awareness Newsletter</td>
</tr>
<tr>
<td>Red Cross workers</td>
<td></td>
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<tr>
<td>Sheraton Health Week</td>
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</table>

<table>
<thead>
<tr>
<th>Mass Media</th>
<th>Printed Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td></td>
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<tr>
<td>Radio</td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td></td>
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</tbody>
</table>

Fan Mail: 200/month – students, teachers and others (non diabetic)

<table>
<thead>
<tr>
<th>Awareness</th>
<th>Community Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCD Program in Labasa</td>
<td>National Diabetes Foundation</td>
</tr>
<tr>
<td>World Diabetes Day</td>
<td>National Training Courses</td>
</tr>
<tr>
<td>Festivals, carnivals, bazaars</td>
<td>District Seminars</td>
</tr>
<tr>
<td>World Food Day Celebrations</td>
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</tbody>
</table>

National Diabetes Foundation

When opening the National Diabetes Centre on 13/9/1984 the Right Honorable the Prime Minister Ratu Sir Kamisese Mara said “Because of the wide incidence of the disease, this National Diabetes Centre will need the support of the citizens of Fiji in order that its work is carried out effectively. The Minister of Health and Social Welfare has appointed a National Committee to raise funds for the Centre and assist in its administration”.

The Chairman of the Committee was Mr. Mahendra Motibhai Patel CBE (CEO of Motibhai Company), Secretary Ms. Clair Miller and Treasurer Mr. N. K. Ariyan and members included:-

Mr. Noor Dean, Mr. Ikbal Jannif, Mr. Edward March
Mr. Mohan Musadilal, Dr. Rosemary Mitchell
Mr. Hari Punja OBE, Mr. Rohit Punja, Dr. Margaret Cornelius
Mr. Savenaca Siwatibau, Mrs. Jokapeci Koroi
Mr. Tomasi Vueltivonivi, Dr. Peni Rika Dr. Kay Hearder
Mr. Bob Kumar, Mr. Ram Shankar, Dr. Parshu Ram
Mrs. S. Stoddart, Mrs. H. S. Niranj
Mr. Vinod Maganlal Rai, Mr. Praveen Sundarjee
Mr. D. Rathod, Mr. Gurbachan Singh, Mr. Bachu Bhai

The terms of reference of the Committee were to raise funds for the National Diabetes Centre, assist in community education, assist in establishing of centres in other parts of Fiji and to help on furthering the objectives of the National Diabetes Centre.

After a few months the name of the Committee was changed to the National Diabetes Foundation of Fiji. The Foundation had been very active in raising funds for the Centre (for diabetic seminars, facilities, and production of educational materials), community awareness and education (production of educational materials, supplements in newspapers and...
Diabetes Awareness Newsletters) and assisting in setting up diabetic centres in Nausori and Nadi.

The National Diabetic Foundation started NDF Membership drive (Individual membership $10 annually, Family membership $20 annually and Corporate membership $50 annually, Individual life membership $500 and Corporate life membership $1000) and raised $26,000. The first Corporate life member was Mr. Ben Jannif.

Over a period of years some members moved overseas and some new members were appointed. The Board of members of the National Diabetes Foundation in 1994 were:-

Patron: His Excellency Ratu Sir Kamisese Mara, GCMG, KBE, President, Republic of Fiji.

Vice Patrons: Hon. Dr. Apenisa Kurisaqila Speaker House of Representatives
Prof. John Turtle, Sydney, Australia
Prof. Paul Zimmet, Melbourne, Australia
Prof. Shigeaki Babam Kobe, Japan

Chairman: Mr. Mahendra Motibhai Patel CBE
Secretary: Sr. W. Caginiliwalala
Treasurer: Mr. Narendra Kumar Ariyan

Members: Mr. Ram Shankar, Mr. Bachu Bai JP, Mr. Joel Sahai
Dr. M. Cornelius, Dr. Parshu Ram, Mr. Tomasi Vuetilovoni
Dr. Josaia Taka, Mr. Emori Naqova, Mrs. A. V. Tukunia
Dr. Seru Lomani, Dr. Rosemary Mitchell, Mrs. Alison Cupit
Mr. Edmund March, Mr. Archie Seeto, Mr. Chang Yee
Ratu Isoa Gavidi, Mr. Ashok Patel, Mr. Dewan Chand
Mr. Nirmal Niranjaj, Mr. Razak Akbar, Dr. Peni Rija JP
Mr. Tom Rickets

The members of the National Diabetes Foundation were committed and dedicated individuals to community health and served as pillar of strength for the National Diabetes Centre.

Diabetes Awareness Newsletter

In 1987 the National Diabetes Centre started producing regular triannual eight page “Diabetes Awareness” newsletter to increase public awareness and to educate the community. About half the space in the newsletter was devoted to feature articles and rest to other important information on diabetes.

The feature articles became a major source of reference on diabetes for the patients, their relatives, the community and the health workers’. With 10,000 copies there was a wide circulation to all hospitals, health centres, nursing stations, schools and teaching institutions, municipal bodies, health workers, community leaders and the members of the community involved in diabetic activities’.

With continuing heavy demand and the copies of the newsletter per issue were increased to 15,000 in 1989. This newsletter was totally funded by the National Diabetes Foundation.

The newsletter was well commented nationally and internationally:-

“It is the only available literature suited to our local needs, apart from the international use and reputation it now enjoys. While other papers of our trading in Fiji have failed or faltering, your magazine has become a clarion for the health worker (Dr. B. P. Ram, DMO, Rewa, 1989).

“The Diabetes Awareness Newsletter are an excellent production” (Prof. D. W. Beaven, Christchurch, NZ, 1988).

“Diabetes Awareness is an interesting comprehensive and well nicely illustrated journal. In a few pages it gives information on the organization, endeavors and the success of diabetic service in that part of the Pacific” (K. Seidl, Bulletin, Delivery of Health care for Diabetes Worldwide, Yugoslavia).

Educational Materials

The National Diabetes Centre produced a large number of educational materials that had been used extensively to increase awareness and to educate the health care professionals, the patients and their families and the community. Several of these had to be reprinted in view of the heavy demand. Diabetes Awareness Newsletter, with 15,000 copies per issue, remained the most widely circulated of the publications. The list of educational material produced by the Centre is:-

a) A set of six pamphlets in English, Fijian and Hindu
   i. Common question in diabetes
   ii. How do I know I have diabetes
   iii. Learning to live with diabetes
   iv. Lead a normal life with diabetes
   v. A diabetic diet is a healthy diet
   vi. Foot care in diabetes

b) A set of six colored posters in English, Fijian and Hindustani on :-
   i. What is diabetes
   ii. Symptoms of diabetes
   iii. Management of diabetes
   iv. Food and Diabetes
   v. Measuring control of diabetes
   vi. Complication of diabetes

c) Booklets on:-
   i. Diabetes and Insulin (24 pages)
   ii. Food and Diabetes (44 pages)

d) Monographs on :-
   i. Diabetes in Fiji (80 pages)
   ii. Cardiovascular Disease in Fiji (70 pages)

e) A pamphlet on Urine Testing with Benedict’s Solution

f) A leaflet on Diabetes Prevention (8 pages)

g) Colored posters on:-
i. Diabetes prevention (2) in English, Fijian and Hindi
ii. Good Eating Guidelines in English, Fijian and Hindi
iii. Foot care in diabetes
iv. Weight Awareness
v. Urine testing with Benedict’s Solution
h) Guidelines on “The Diagnosis and registration of Diabetes”
i) Diabetes Aware Newsletters - Three issues annually since 1987

Publications on Diabetes

The Centre also contributed a large number of publications. These included five chapters in books, three sections in proceeding of symposium/congress, 33 articles in the Fiji Medical Journal, the General Practitioner’s Journal, the Science Journal and Fiji Food and Nutrition Newsletter. Eleven articles were published in overseas journals.

Research Activities

The most important of these was the Incidence Study of urban (Suva) and rural (Sigatoka) cohorts form the 1980 National Diabetes and Cardiovascular Diseases Survey. This study involving 2500 adults has been in progress since 1981.

The project was being carried out in collaboration and was largely funded by Professor Paul Zimmet, the Director of Lions International Diabetes Institute of Melbourne.

An analysis of the data for the first five years showed that diabetics was associated with several adverse health outcomes.

The centre collaborated in the New Zealand Medical Research Council funded Gestational Diabetes Study. Dr. R. Gyaneshwar the then Senior Lecturer in Obstetrics at the Fiji School of Medicine, was the chief investigator.

The Centre supervised a number of other studies. These included the “Study of Diabetes in Fiji Islands, A descriptive analysis of in-patient morbidity and mortality data for the period 1983 to 1986” by Dr. S. R. Govind, the study on the “Efficacy of Diabetes Education in the Management of Diabetes in Fiji” by Nirmala Kumar and the study on “Diabetes Foot Problems” by M. A. Taylor, from the University of Aberdeen, Scotland.

The centre continued to provide regular advise and guidance to students both of secondary and tertiary intuitions on diabetes-related projects and studies.

A Decade of Developments, Progress and Achievements

Since the establishment, the centre had acquired considerable expertise in the field of diabetes and was frequently requested to provide advisory and consultant to regional seminars, workshops and conferences on diabetes and in the development of diabetes activities in regional islands.

The Centres reputation was greatly enhanced when its director was elected a Fellow of All India Institute of Diabetes in 1988. This prestigious Institute conferred Fellowships on distinguished diabetologists throughout the World, as recognition of their contributions directed at improving the quality of life of diabetics through advancement of knowledge and improved methods of clinical care and education. By 1988 the All India Institute of Diabetes had 114 fellows.

In the first ten years the Centre developed and conducted 45 National Training Courses and trained 513 health professionals i.e 105 doctors, 61 medical assistants, 320 nurses and 27 dietitians. These health workers were from both the clinical and public health divisions. One hundred and eighty four were from the Central division, 66 from the Eastern, 109 from the Northern and 154 from the Western division. The Centre also conducted 59 district seminars, nine sessions with general practitioners and gave lectures to 27 high schools in the country. It was very encouraging to see three from the private sector attended the training course. Besides being the national training centre, the activities were expanded to train health professionals form regional countries. By 1994 health professionals from Tonga (2), Marshall Islands (7), Solomon Islands (2) and Papua New Guinea (4) were trained.

The education of diabetics and their relatives was given the highest priority. On an average 450 new diabetics and their relative attended the Centre for education each year. Also education was provided to 170 inpatients at the CWM Hospital each year. This was greatly improved by a large number of diabetic educational materials and having two trained diabetic educators.

Over the years the National Diabetes Centre became a very important resource centre for doctors, nurses, paramedics, students, patients and their relatives and the community. It was most encouraging to see an increase in the number of non-diabetics, high school students, and teachers seeking advice and information from the centre through telephone calls, letters and visits to the centre. In 1989 51 adult non-diabetics visited the centre regarding diabetes educational materials. This number gradually increased to 700 by 1994 (Fig. V). A similar and more marked increase was seen from students and teachers. These requests increased from 109 in 1989 to 2500 in 1994 (Fig. VI) of these 1500 were from the Northern, Eastern and Western Divisions and 1000 form the central division.

The Centre participated and supervised a number of research projects. Besides producing a large number of diabetes educational materials, contributed six chapters in books and 44 articles in journals (Ref. NDC Annual Report, 1994).

In view of the rapid development of the centre and its activities in diabetes control and prevention a World Health Organization report in 1988 recommend that the centre should take additional responsibilities in the prevention of Non-Communicable Diseases :-

“The National Diabetes Centre which was established in 1984 is doing excellent work in teaching workers, diabetic patients and the community in the field of primary and secondary pre-
vention of diabetes mellitus. This centre should be extended to an independent National Non-Communicable Diseases Prevention Centre”

It was suggested again in 1992 that :-

“It is the right place for the National Diabetes Centre with its experience for playing a leading role to embark on an ambitious plan of action on Non-Communicable Disease for the decade” (Dr. R. Sarda, WHO, 1992 NDC Report).

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We are most grateful for contributions and assistance of a large number of individuals, institutions, service clubs, media, medical journal, drug companies, PWD, WHO, staff of FSM, lecturers of National hospitals in Suva, Staff of NDC, NDF, Community leaders, FMA, College of GP including Professor P. Zimnet, Professor J. Turtle, Professor Moffit, Dr. R Gyaneshwar, Dr. S. R. Govind, Dr. Ajoankar, Mr. Mahendra Mothibhai Patel, Mr. George Stephen, Dr. M. Cornelius and the community.

We are also very grateful to Roneel Ram for typing and preparation of this article.

References
A more potent drug than other statins

<table>
<thead>
<tr>
<th>Drug</th>
<th>IC_{50} (nmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitavastatin</td>
<td>6.8</td>
</tr>
<tr>
<td>Atorvastatin</td>
<td>15.2</td>
</tr>
<tr>
<td>Simvastatin</td>
<td>18.1</td>
</tr>
</tbody>
</table>

* The lower is the IC_{50} the more is the potency of a drug.

Pitavastatin reduces Triglycerides (TG) more efficiently compared to Atorvastatin

<table>
<thead>
<tr>
<th>Drug</th>
<th>Reduction (%)</th>
<th>Increased (%)</th>
<th>Consistent elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TC</td>
<td>LDL-C</td>
<td>TG</td>
</tr>
<tr>
<td>Pitavastatin</td>
<td>35.4</td>
<td>42.8</td>
<td>24.2</td>
</tr>
<tr>
<td>Atorvastatin</td>
<td>33.8</td>
<td>40.7</td>
<td>16.8</td>
</tr>
</tbody>
</table>

Most suitable for diabetic dislipidaemic patients
(No effect on plasma or stored glucose unlike atorvastatin)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Plasma glucose</th>
<th>HbA1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitavastatin</td>
<td>No effect</td>
<td>No effect</td>
</tr>
<tr>
<td>Atorvastatin</td>
<td>Increased by 19.73%</td>
<td>Increased from 7.0% to 7.4%</td>
</tr>
</tbody>
</table>

Pitavastatin has no drug-drug interaction

<table>
<thead>
<tr>
<th>Drug</th>
<th>Activation or metabolism by CYP 3A4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atorvastatin or Simvastatin</td>
<td>Yes</td>
</tr>
<tr>
<td>Clopidogrel or Digoxin</td>
<td>Yes</td>
</tr>
<tr>
<td>PPIs</td>
<td>Yes</td>
</tr>
<tr>
<td>Pitavastatin (Due to Cyclopropyl Ring)</td>
<td>No</td>
</tr>
</tbody>
</table>
Hippocratic Oath: Classical Version

I swear by Apollo Physician and Asclepius and Hygieia and Panaceia and all the gods and goddesses, making them my witnesses, that I will fulfill according to my ability and judgment this oath and this covenant:

To hold him who has taught me this art as equal to my parents and to live my life in partnership with him, and if he is in need of money to give him a share of mine, and to regard his offspring as equal to my brothers in male lineage and to teach them this art if they desire to learn it without fee and covenant; to give a share of precepts and oral instruction and all the other learning to my sons and to the sons of him who has instructed me and to pupils who have signed the covenant and have taken an oath according to the medical law, but no one else.

I will apply dietetic measures for the benefit of the sick according to my ability and judgment; I will keep them from harm and injustice.

I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect. Similarly, I will not give to a woman an abortive remedy. In purity and holiness, I will guard my life and my art.

I will not use the knife, not even on sufferers from stone, but will withdraw in favor of such men as are engaged in this work.

Whatever houses I may visit, I will come for the benefit of the sick, remaining free of all intentional injustice, of all mischief and in particular of sexual relations with both female and male persons, be they free or slaves.

What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself, holding such things shameful to be spoken about.

If I fulfill this oath and do not violate it, may it be granted to me to enjoy life and art, being honoured with fame among all men for all time to come; if I transgress it and swear falsely, may the opposite of all this be my lot.

Translation from the Greek by Ludwig Edelstein. From the Hippocratic Oath: Text, Translation, and Interpretation, by Ludwig Edelstein. Baltimore: Johns Hopkins Press, 1943.

Hippocratic Oath: Modern Version

I swear to fulfil, to the best of my ability and judgment, this covenant:

I will respect the hard-won scientific gains of those physicians in whose steps I walk, and gladly share such knowledge as is mine with those who are to follow.

I will apply, for the benefit of the sick, all measures [that] are required, avoiding those twin traps of overtreatment and therapeutic nihilism.

I will remember that there is art to medicine as well as science, and that warmth, sympathy, and understanding may outweigh the surgeon’s knife or the chemist’s drug.

I will not be ashamed to say “I know not,” nor will I fail to call in my colleagues when the skills of another are needed for a patient’s recovery.

I will respect the privacy of my patients, for their problems are not disclosed to me that the world may know. Most especially must I tread with care in matters of life and death. If it is given me to save a life, all thanks. But it may also be within my power to take a life; this awesome responsibility must be faced with great humbleness and awareness of my own frailty. Above all, I must not play at God.

I will remember that I do not treat a fever chart, a cancerous growth, but a sick human being, whose illness may affect the person’s family and economic stability. My responsibility includes these related problems, if I am to care adequately for the sick.

I will prevent disease whenever I can, for prevention is preferable to cure.

I will remember that I remain a member of society, with special obligations to all my fellow human beings, those sound of mind and body as well as the infirm.

If I do not violate this oath, may I enjoy life and art, respected while I live and remembered with affection thereafter. May I always act so as to preserve the finest traditions of my calling and may I long experience the joy of healing those who seek my help.

—Written in 1964 by Louis Lasagna, Academic Dean of the School of Medicine at Tufts University, and used in many medical schools today.
Linagliptin Tablets 5 mg

The safest antidiabetic

✔ Safe for renal impaired patients
✔ Safe for hepatic impaired patients
✔ Efficacy better than Sitagliptin
✔ Reduces LDL-C level more than Sitagliptin
✔ Convenient once daily dose

Prescribing information:

Composition: Linagliptin Tablet: Each film coated tablet contains Linagliptin INN 5 mg. Pharmacology: Linagliptin is an inhibitor of DPP-4, an enzyme that degrades the incretin hormones glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP). Thus, linagliptin increases the concentrations of active incretin hormones. Incretin hormones are secreted at a low basal level throughout the day and levels rise immediately after meal intake. GLP-1 and GIP increase insulin biosynthesis and secretion from pancreatic beta-cells in the presence of normal and elevated blood glucose levels. Furthermore, GLP-1 also reduces glucagon secretion from pancreatic alpha-cells, resulting in a reduction in hepatic glucose output. Indications: Linagliptin is indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. Linagliptin may be used as monotherapy or in combination with other common antidiabetic medications including metformin, sulfonylureas, pioglitazone, or insulin. As a replacement therapy, it is suitable when metformin therapy is not appropriate due to intolerance or do not provide adequate glycemic control as monotherapy or other antidiabetic drugs are to be discontinued due to renal or hepatic impairment. Important limitations of use: Should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis. Dosage and administration: The recommended dose of Linagliptin is 5 mg once daily and can be taken with or without food. If added with Metformin, the dose of Metformin should be maintained and Linagliptin administered concomitantly. When used in combination with Sulfonamide, a lower dose of Sulfonamide may be considered to reduce the risk of hypoglycemia. Contraindications: Linagliptin is contraindicated to patients hypersensitive to Linagliptin or any of the excipients. Side effects: Some of the less common side effects are nasopharyngitis, hypoglycemia and pancreatitis. Use in special groups: Pregnancy: There are no adequate and well-controlled studies in pregnant women. Linagliptin tablets should be used during pregnancy only if the potential benefit of mother justifies the potential risk of the fetus. Nursing mothers: Caution should be exercised when Linagliptin is administered to a nursing woman. Pediatric patients: Safety and effectiveness of Linagliptin in patients below the age of 18 have not been established. Renal or hepatic impairment: No dose adjustment required. Precautions: When used with an insulin secretagogue (e.g., sulfonylureas) or insulin, consider lowering the dose of the insulin secretagogue or insulin to reduce the risk of hypoglycemia. If pancreatitis is suspected, linagliptin should be discontinued. Drug interactions: Linagliptin doesn’t interact with metformin, glyburide, simvastatin, warfarin, digoxin or oral contraceptives but shows mild to moderate interaction with ritonavir, rifampicin etc. Linagliptin is a weak competitive and a weak to moderate mechanism-based inhibitor of CYP isozyme CYP3A4, but does not inhibit other CYP isozymes. Storage: Store below 30°C & protect from light. Keep out of the reach of children. Packing: Linaglip Tablet: Each box contains 20’s tablets in alu-alu blister pack.

Further information
Web: www.aristopharma.com
E-mail: export@aristopharma.com
Minister opens Primary Care Stress Management Clinic

03/05/2011
The Minister for Health, Dr Neil Sharma officially opened the Primary Care Stress Management Clinic at Samabula Health Centre this morning. The clinic is a first of its kind to service the people of Fiji.

“The huge problems of non-communicable diseases that confront us in the form of obesity, hypertension excess smoking, heavy drinking of alcohol and diabetes have a close relationship to psychological stress and may present in primary care clinics rather than in mental hospitals,” Dr Sharma said.

“The Fiji School of Medicine and the Samabula Health Centre therefore decided two months ago to open a clinic in Samabula to provide a service to those suffering from emotional stress.”

The clinic has started teaching on the psychosocial and family problems that contribute to stresses in people in Fiji and added a new dimension to teaching of medical students in their understanding of human problems. Dr Sharma said post-basic nursing students of psychiatry would help out in this clinic. The clinic will provide training to Fiji National University medical students.
Aroflo
Salbutamol + Fluticasone Propionate

Provides both bronchodilatory & anti-inflammatory action

Better than single agent in controlling asthma

- Salmeterol + Fluticasone 2 inhalations twice daily
- Fluticasone 2 inhalations twice daily
- Salmeterol 2 inhalations twice daily
- Placebo

Prescribing Information


Pharmacology: Aroflo HFA inhaler is a combination of Salbutamol and Fluticasone Propionate. Salbutamol is a selective, long-acting β2-agonist used in the treatment of asthma and other forms of diffuse airway obstruction. Fluticasone Propionate is a corticosteroid with potent anti-inflammatory activity. Fluticasone Propionate is stated to exert a topical effect on the lungs without systemic effects at usual doses. Fluticasone Propionate is contraindicated in patients with hypersensitivity to any of the active substances or to the excipient of this preparation.

Side Effects: As with all HFA inhalers, it is important to be aware of potential adverse effects associated with each of the components of the drug. There may be an increased risk of adverse events following concurrent administration of the two compounds. The pharmacological side effects of fluticasone propionate, such as tremor, palpitations, and headaches, have been reported, but tend to be transient and reduce with regular therapy. Cardiac arrhythmia may occur. There have been reports of angina and hypokalemia reactions. Including rash, edema, and angioedema. There have been reports of bronchospasm and bronchoconstriction. Due to the Fluticasone Propionate component, hoarseness and candidiasis (thrush) of the mouth and throat can occur in some patients. Hoarseness and hoarseness and candidiasis may be relieved by gargling with water after using the product. Symptomatic candidiasis can be treated with topical anti-fungal therapy whilst still continuing with the Aroflo HFA inhaler. Possible systemic effects in children include adrenal suppression, growth retardation, decrease in bone mineral density. Precautions: Aroflo HFA inhaler should not be used to treat acute asthma symptoms for which a nebulized and short-acting bronchodilator is required. Aroflo HFA inhaler should not be stopped abruptly. It should be administered with caution in patients with pulmonary tuberculosis. Aroflo HFA inhaler should be used with caution in patients with severe cardiovascular disorders, heart rhythm abnormalities, diabetes mellitus, porphyria, uncorrected hypokalemia or patients predisposed to low levels of serum potassium. Systemic effects may occur with any inhaled corticosteroid, particularly at high doses prescribed for long periods. These effects are more likely to occur with oral corticosteroids. It is important, therefore, that the patient is reviewed regularly and the dose of inhaled corticosteroid is reduced to the lowest dose at which effective control of asthma is maintained. Use in special groups: Use in pregnancy: There are insufficient data on the use of Salmeterol & Fluticasone Propionate during pregnancy. Administration of drugs to pregnant women should only be considered if the expected benefit to the mother is greater than any possible risk to the foetus. Use in lactation: There are no data available for human breast milk. Administration of Salmeterol & Fluticasone Propionate to women who are breast-feeding should only be considered if the expected benefit to the mother is greater than any possible risk to the child. Use in special patient groups: There is no need to adjust the dose in elderly patients or in those with renal impairment. There are no data available for use of Aroflo HFA inhaler in patients with hepatic impairment. Drug interactions: bronchial non-selective and selective β-blockers should be avoided in patients with asthma, unless there are compelling reasons for their use. Care should be taken while co-administering of CYP3A4 inhibitors (i.e. Ketoconazole, Rifabutin) & Salmeterol-Fluticasone as there is an increased risk of systemic side effects of individual component. Storage: Pressurized canister: Do not puncture, break or burn even when apparently seemed empty. Keep away from sunlight and heat. Store below 30°C. Do not freeze. Keep away from eyes. Keep away from children. To be dispensed only on or by the prescription of a registered physician.

Packaging: Aroflo-100 HFA inhaler: Each canister contains 120 / 200 puffs. Aroflo-250 HFA inhaler: Each canister contains 60 / 120 / 250 puffs. Aroflo-250 HFA inhaler:

Each canister contains 60 / 120 / 250 puffs.

Further information

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Manufactured by:

ARISTOPHARMA LTD.
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The Pharmatimes 19
Chronic warty type lesion, non pruritic, raised, waxy and scaly

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Email the answer to rraju@connect.com.fj
All correct responses go into a draw for a FJD$200 prize money.

NEVER IN MY WHOLE LIFE WOULD I IMAGINE MY HANDS WOULD CONSUME MORE ALCOHOL THAN MY MOUTH