

HANSEN'S DISEASE

The Trinidad and Tobago Story
National Surveillance Unit, MoH
(TRT)

DESCRIPTION

- **Leprosy** or **Hansen's disease (HD)**, is a chronic disease caused by the bacteria *Mycobacterium leprae* and *Mycobacterium lepromatosis* Named after physician Gerhard Armauer Hansen.
- Leprosy is primarily a granulomatous disease of the peripheral nerves and mucosa of the upper respiratory tract; skin lesions are the primary external sign.
- Left untreated, leprosy can be progressive, causing permanent damage to the skin,

TRANSMISSION

- The mode of transmission of Hansen's disease remains uncertain, most investigators think that *M. leprae* is usually spread from person to person in respiratory droplets. With improved living standards and hygiene, leprosy was expected to disappear.
- Armadillos are one of the very few mammals that harbor the bacteria that cause the sometimes disfiguring disease, which first shows up as an unusual lumpy skin lesion.

POSSIBLE ARMADILLO LINK?



In the US scientists took skin biopsies from 50 leprosy patients being treated at a Baton Rouge clinic. Three-quarters had never had foreign exposure, but lived in Southern states where they could have been exposed to armadillos.

An analysis found that samples from the patients and armadillos were genetically similar to each other and were different from leprosy strains found elsewhere in the world. The unique strain was found in 28 armadillos and 25

INCUBATION PERIOD

- The incubation period is **3 to 15** years or more, much longer than for most diseases; no other bacillus selectively invades peripheral nerves.

TREATMENT

- The treatment for leprosy, using a drug called Dapsone, was established in the 1940s.
- The World Health Organization (WHO) now provides Multi Drug Therapy (MDT) to any country in need as part of their ongoing efforts to eliminate leprosy as a world health problem

TREATMENT (cont'd)

- Since 1995, WHO has supplied MDT free of cost to leprosy patients in all endemic countries.
- The drugs used in WHO-MDT are a combination of Rifampicin, Clofazimine and Dapsone for Multi-Bacillary (MB) leprosy patients and
- Rifampicin and Dapsone for Pauci-Bacillary (PB) leprosy patients.
- Among these Rifampicin is the most important antileprosy drug and therefore is included in the treatment of both types of leprosy.
- Treatment of leprosy with only one antileprosy drug will always result in development of drug resistance to that drug. Treatment with Dapsone or any other antileprosy drug used as monotherapy should be considered as

History of Leprosy

- Because of ancient references going back to at least 1350 BCE in Egypt, leprosy is sometimes referred to as the “oldest recorded disease” or the “oldest known disease.” In one form or another, leprosy appears to have stalked human beings for millennia, always causing those who suffer from it to be ostracized from their communities and encouraging the belief that sufferers are being punished by the gods.
- Leprosy in the Old Testament:
In the Old Testament of the Bible, leprosy is frequently referred to as an ailment afflicting not just humans, but also houses and fabric. References to leprosy obviously aren't to what is known as leprosy today, but a variety of skin disorders as well as some type of mold or mildew which might affect objects. Key to understanding leprosy in the Old Testament is that it's seen as a form of physical and spiritual pollution which requires one to be

Bible references to Leprosy

Much of Leviticus 13 is dedicated to the diagnosis and follow up of Leprosy

Strict isolation was the recommended public health measure according to the law of Moses

13:45} And the leper in whom the plague [is,] his clothes shall be rent, and his head bare, and he shall put a covering upon his upper lip, and shall cry, Unclean, unclean. {13:46} All the days wherein the plague [shall be] in him he shall be defiled; he [is] unclean: he shall dwell alone; without the camp [shall] his habitation.

The island colony

LOCAL HISTORY OF LEPROSY

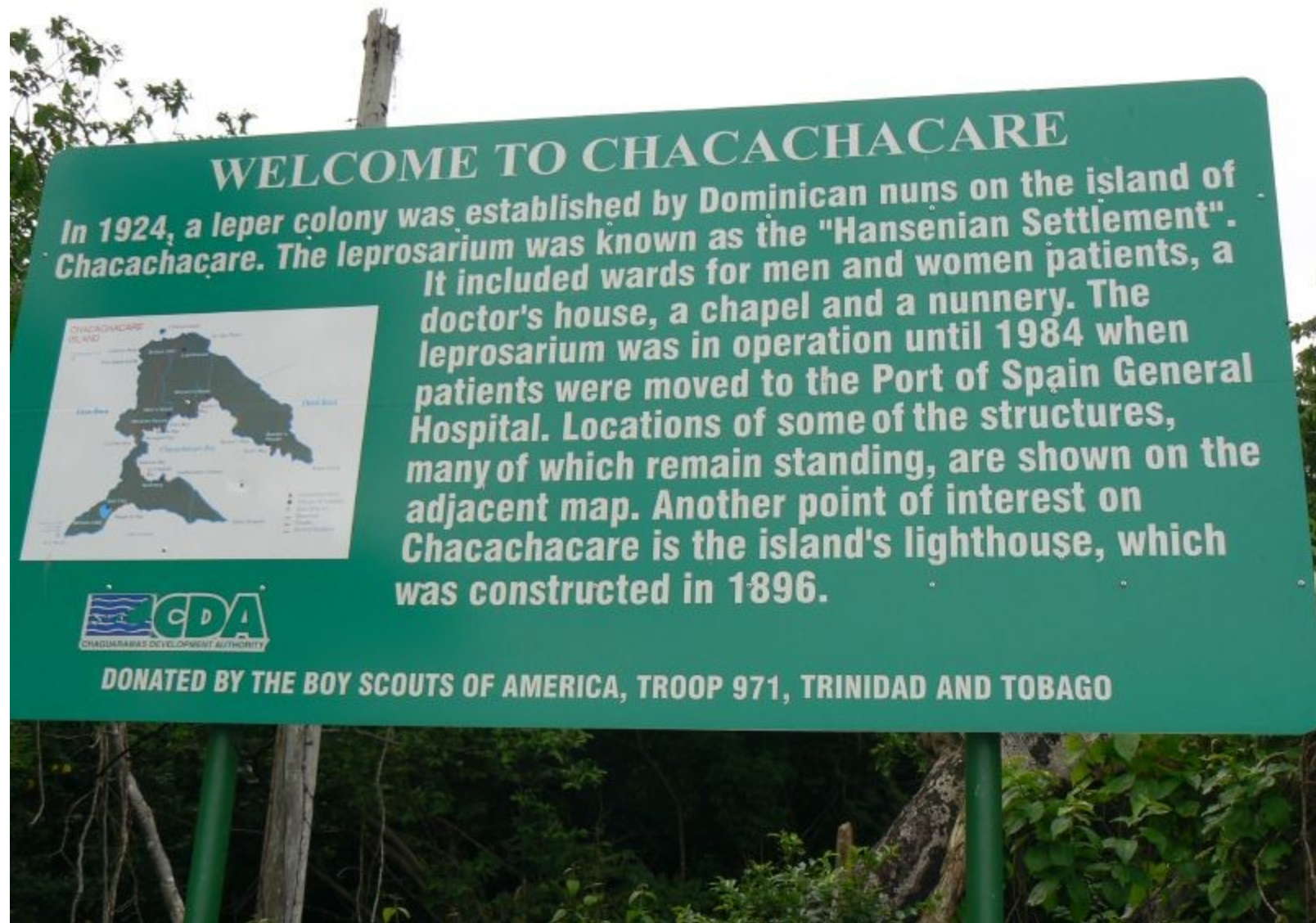
Population by County Trinidad and Tobago, 2010.



Chacachacare Leper Colony



Sign-board on the island



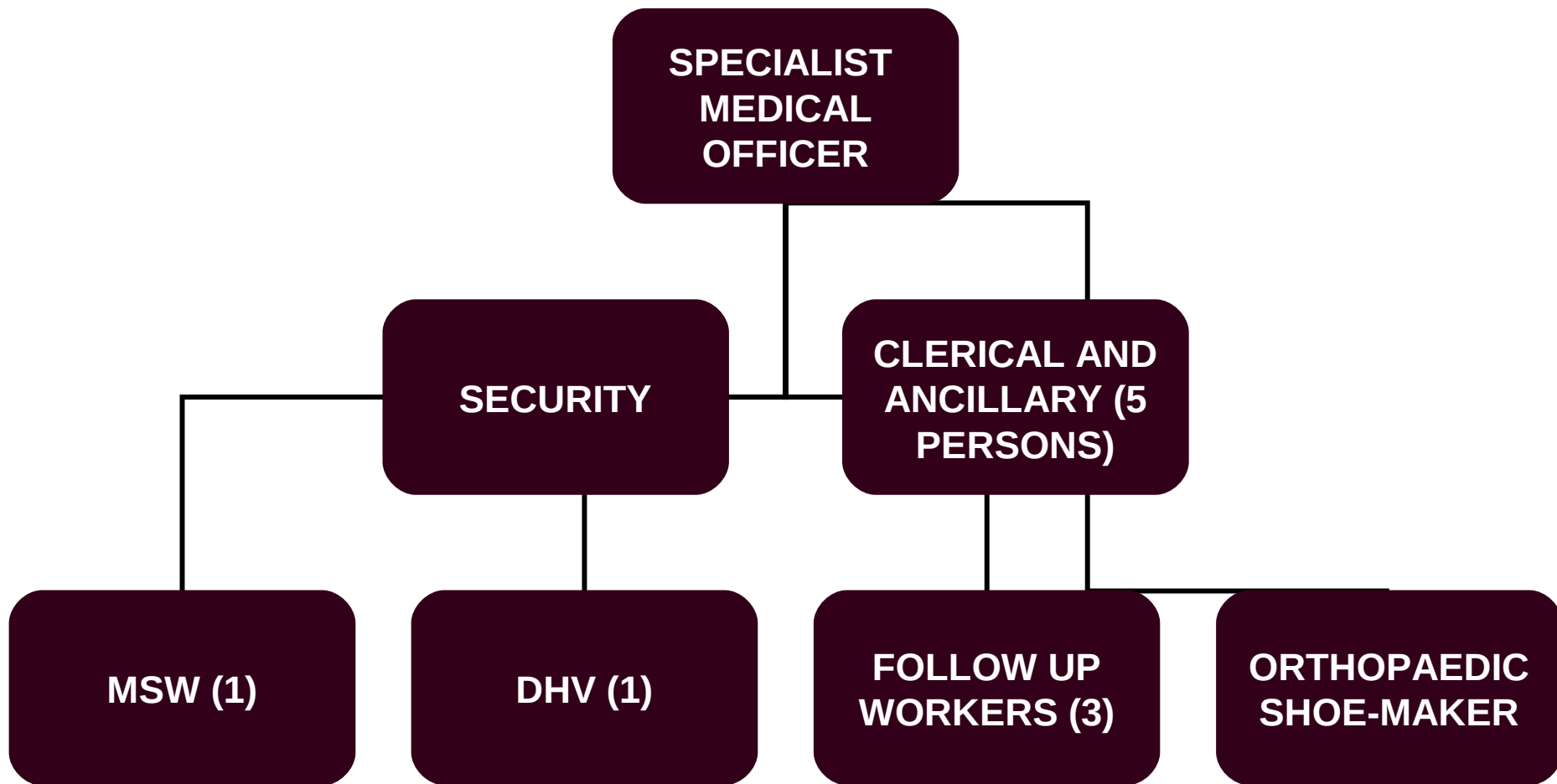
? Hansen's Clinic Building



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CURRENT SITUATION IN TRINIDAD AND TOBAGO

ORGANOGRAM FOR HANSEN'S STAFF



CLINIC SCHEDULE

- There are 12 CLINICS per month.
- Bi-monthly clinics are held at:-
- Arima, Chaguanas, George Street, San Fernando, Sangre Grande, St. Joseph and Tobago has a clinic conducted once a month.

REFERRALS

Surveillance is accomplished, in the main, by referral to the Hansen's clinic

Referrals are received from

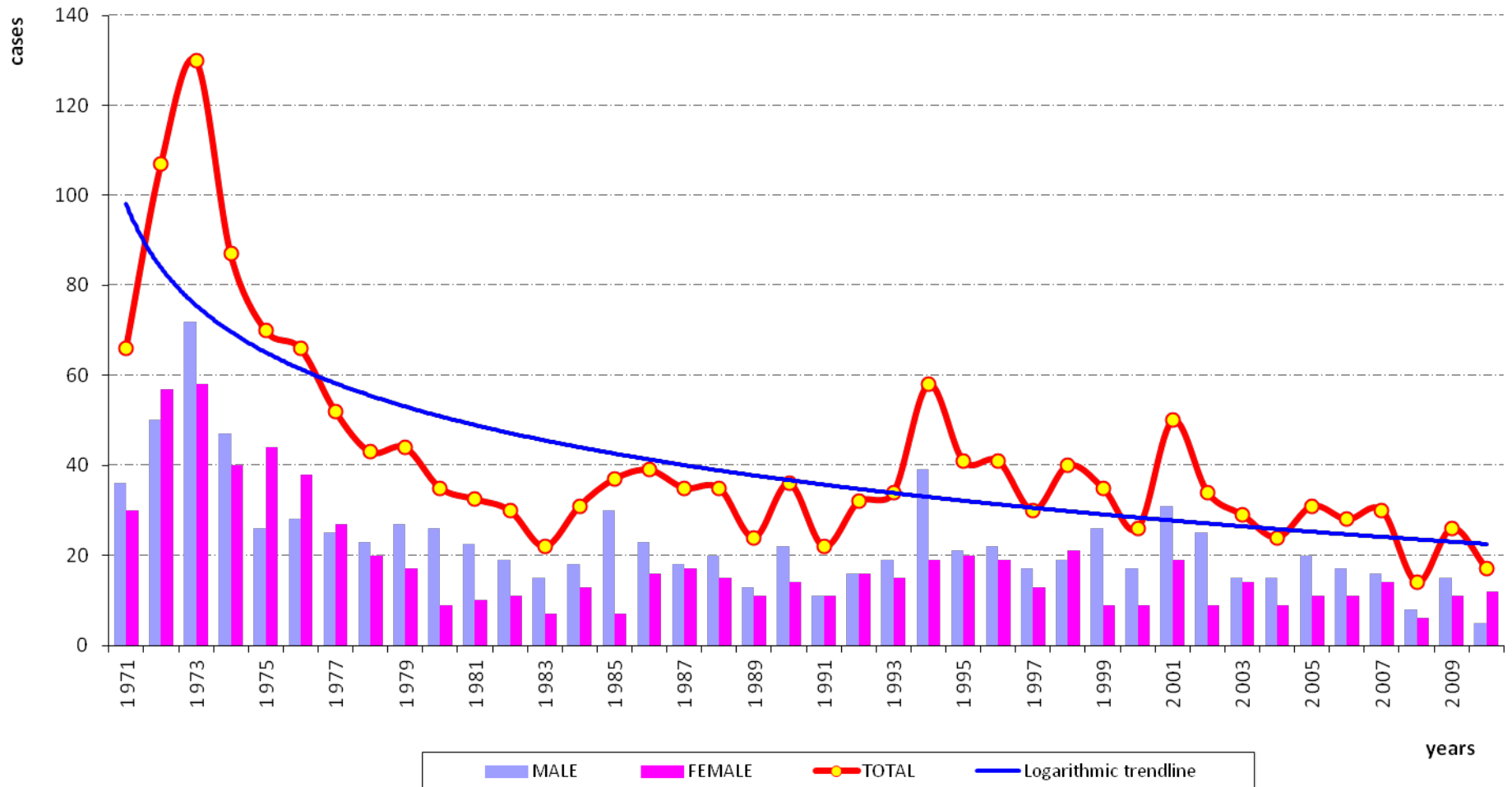
- General Health Centre clinics
- Specialist Skin Clinics
- General Practitioners
- Nurses
- Patients of the clinic

STATUS of TRINIDAD and TOBAGO

- There are 46 forty-six active cases at present
- There are 91 ninety –one cases under surveillance.
- Six monthly visits are done for a period of 3 (three) to 5 (five) years after active treatment is completed.
- In the year 2010 there were 17 new cases
- In 2011 there are already 15 new cases

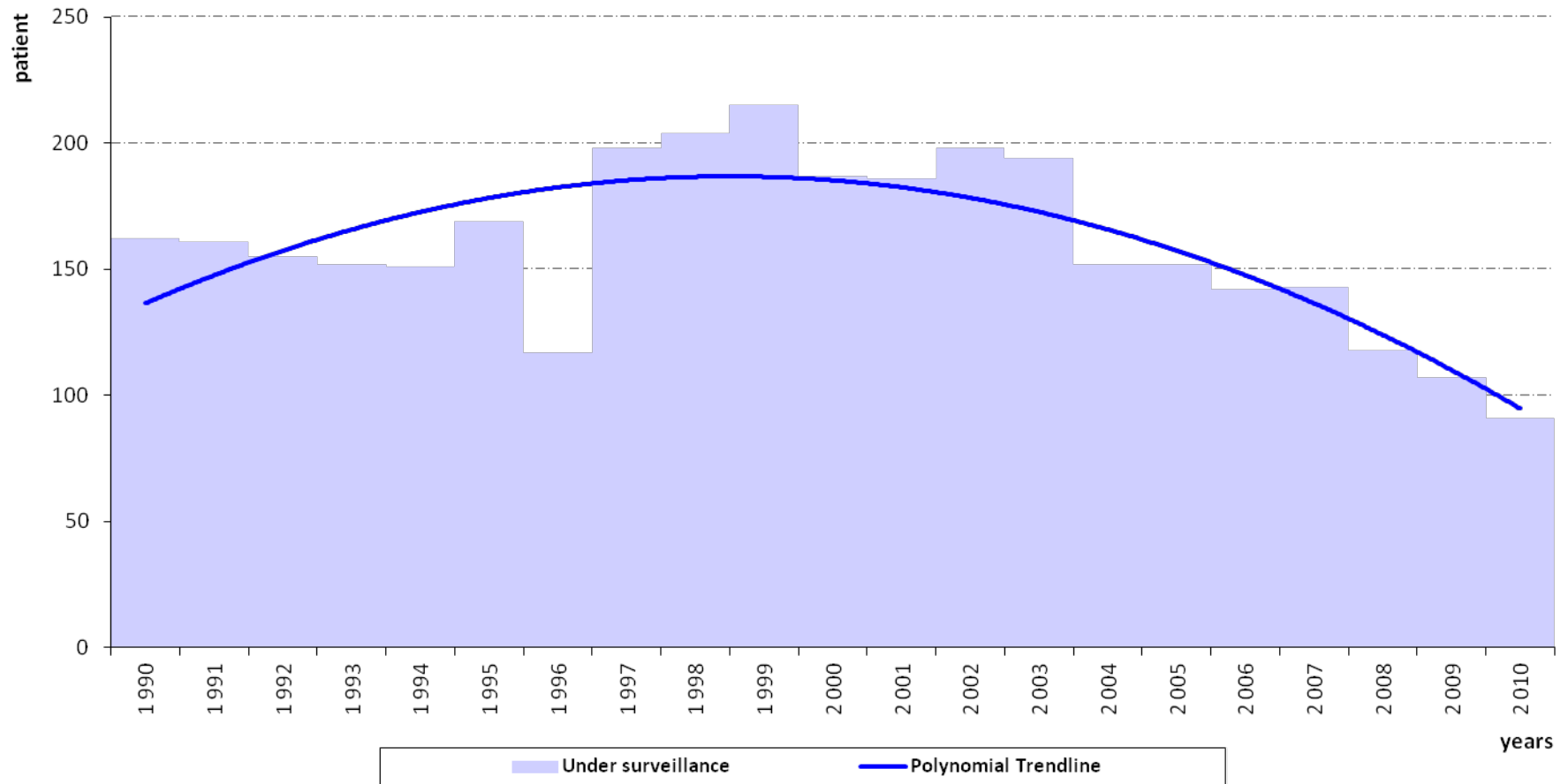
Yearly New Cases of Hansen's Disease

Hansen's disease by sex. Trinidad and Tobago. 1971 - 2010.

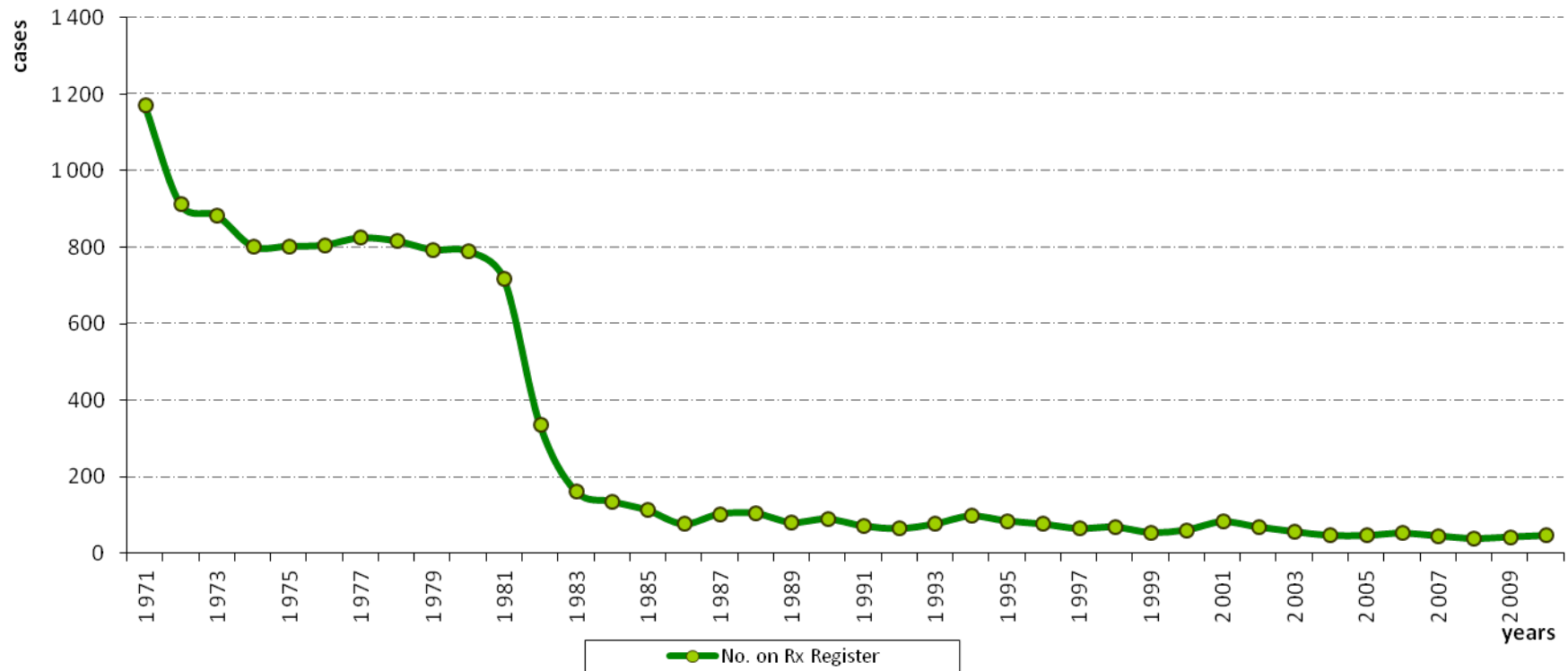


Yearly patients Under Surveillance

Patients Under surveillance. Trinidad and Tobago. 1990 - 2010.



No. on Rx Register. Trinidad and Tobago. 1971-2010.



CHALLENGES

- While leprosy is infectious, it's hard to catch. Those most at risk are family members who are in constant contact with an untreated person. Leprosy can't be spread through casual contact such as handshaking, or sexual intercourse.
- The disease has long been misunderstood and those who contracted it were often shunned. Fear of its spread led some countries to quarantine people. False stories about fingers and toes falling off added to the stigma.

CHALLENGES (cont'd)

- The disease is curable with prompt treatment of antibiotics before complications set in.
- The drugs typically kill the bacteria within days and make it non-contagious.
- It usually takes a year or two to fully clear the germ from the body.

WAY FORWARD

- Because of the increase of new cases for 2011 there is a need for enhanced awareness among the medical staff re Health Education on the spread and diagnosis of the condition.
- The general public also needs to be sensitized about the disease to ensure that all suspected cases are referred to the Hansen's Clinic for confirmation.

Thank you