

- 1700 - 6 years later, son of Anne, Duke of Gloucester and heir to the throne died of smallpox, precipitating a constitutional crisis resulting ^{as you know,} in the Act of Settlement, a formidable step forward in ^{the independence of the House of} ~~the independence of the House of~~ Commons, ~~and~~ ^{and} ~~preventing~~ ^{preventing} the people from the crown.

and potentially today were there no vaccine)

- Smallpox at that time ^{effectively} was like ~~measles~~ chickenpox w, until recently - like measles.
- All eventually acquired the disease - 20 to 40 % died. ~~No~~ - Herd immunity
- Principal cause of blindness in Europe
- Population grew ^{in England - had taken 200 years to double} ~~at that time~~ ^{smallpox} ~~infectious diseases~~ until the middle of the 18th century when control was achieved, population burgeoned, urbanization occurred, ~~and~~ concurrently setting the stage for the Industrial Revolution.

ALL THIS HAS CHANGED

- On October 26, 1577, a notable event occurred - the world's last known case of smallpox - the last in an unending chain of infection antedating mankind's history.

- The disease - virus
- person-to-person

③ ② ④ ⑤

- So far as is known, the disease remained remarkably stable thro history -
- First accounts of the disease - China + India
- 1600 B.C. - early Sanskrit texts which prescribe specific offerings (prajalis) for the Goddess of Smallpox
- 1160 B.C. - Death of Ramses V

- Origins with the first settlements of man - probably northern China and the Indo-gangetic plain of India
- Spread to Middle-east + Africa - perhaps periodically
- Periodically transmitted to
- Finally carried into Europe - became established in the early Middle Ages

LADY MARY WORTLEY MONTAGUE

— Town Eclogues 1715

Autobiographical

The wretched Flavia, on her couch reclin'd,
Thus breath'd the anguish of a wounded mind,
A glass revers'd in her right hand she bore,
For now she shunn'd the face she sought before.

"How am I chang'd! alas! how am I grown
A frightful spectre to myself unknown!
Where's my complexion? where my radiant bloom,
That promis'd happiness for years to come?"

... let me live in some deserted place,
There hide in shadows this inglorious face.
Plays, opera, circles, I no more must view!
My toilette, patches, all the world adieu!"

in Europe - in ~~the~~ ^{the} Americas

in 1500 - population est. 50

disaster.

3×10^6 ($1/10$)
 1.5×10^6 .

China, India

E =

(16) Arm & arm.

The cow.

Problem of supply

- Not until WW II ^{was} ~~did~~ smallpox eliminated from Europe + N America
U.S. - 50 000 cases in 1930; 10 000 cases in 1939
Denise - refrigerator

Stable vaccine - 1950's

Reference made to the havoc caused by the disease in Europe - in ~~the~~ ^{the} Americas even more dramatic

⑪ • When ^{rel. of expedition} Cortes brought smallpox to Mexico in 1520 - population est. to be some 25×10^6

3.5×10^6 died; economic disaster.

within 50 years - population of 3×10^6 ($1/10$)

by 1620 - declined to 1.5×10^6 .

• Settlement of North America

• SMALLPOX CONTROL

VARIOLATION - the principle - China, India

PRACTICE ⑫ ⑬ ⑭ ⑮

1720's LADY MARY WORTLEY MONTAGUE - Poem.

Problems of variolation

• JENNER ⑯ ⑰

Rapid spread of vaccination

⑱ Arm to arm.

The cow.

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Stable vaccine - 1950's

- 1958 USSR proposal
80% vaccination - New Delhi.
100% vaccination
- 1966 Intensified program - Room for cond. $\leftarrow$
 $\$ 2.5 \times 10^6 \div 50$
10 years
Person to person - infect. period
No carrier state
No animal reservoir
Exhaust susceptible, & die out
- 1967 situation
131 000 cases - 48 countries
Strategy - vaccination reporting.
NEEDLE
PLASTIC CASE
VAC. EQUIP.
VACCINE
By 1969, all but one country participating
- 1970

- 1973 India problem -
June 1973 Search. ~~TARGET 2000~~ TOAST - "a dedication"
120 000 people
8 tons of forms
Results
SEARCH
Horn of Africa Rabies Band
Horn of Africa
The last curve

Celebration (LASKER)
50 countries - commemorative stamps

Future scenario
Oct. - the last search
Cost 100×10^6 / 8×10^6 per year
Savings 1 billion. $\rightarrow$ A small step.