



Government of **Western Australia**
Department of **Health**

Developing sustainable E (environmental health) practices in 'SAFE' - the commitment to eliminate trachoma in Australia

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Trachoma

Is an ancient blinding disease
Occurs with crowding and
poor hygiene
Clean faces is key



Chlamydia – every species has one!

C. trachomatis- humans, ocular (ABC), genital (D-K) and LGV

C. muridarum- mice and hamsters

C. suis- pigs

C. pneumoniae- humans and many mammals, reptiles and amphibians

C. pecorum- ruminants and marsupials

C. psittaci- birds, cattle, sheep, horses, marsupials and occasionally humans

C. abortus- cattle, pigs, sheep and goats

C. caviae- guinea pigs

C. felis- cats

Chlamydia – every species has one!

But chlamydia do not cause trouble
until they are crowded together;

Humans - trachoma and inclusion conjunctivitis,
genital infection,
pneumonia

Guinea pigs, cats and crocodiles – conjunctivitis

Birds, mice and hamsters - pneumonia

Cattle, sheep, horses, pigs, and goats - abortions and
arthritis

Koalas – sticky tail

Chlamydia trachomatis

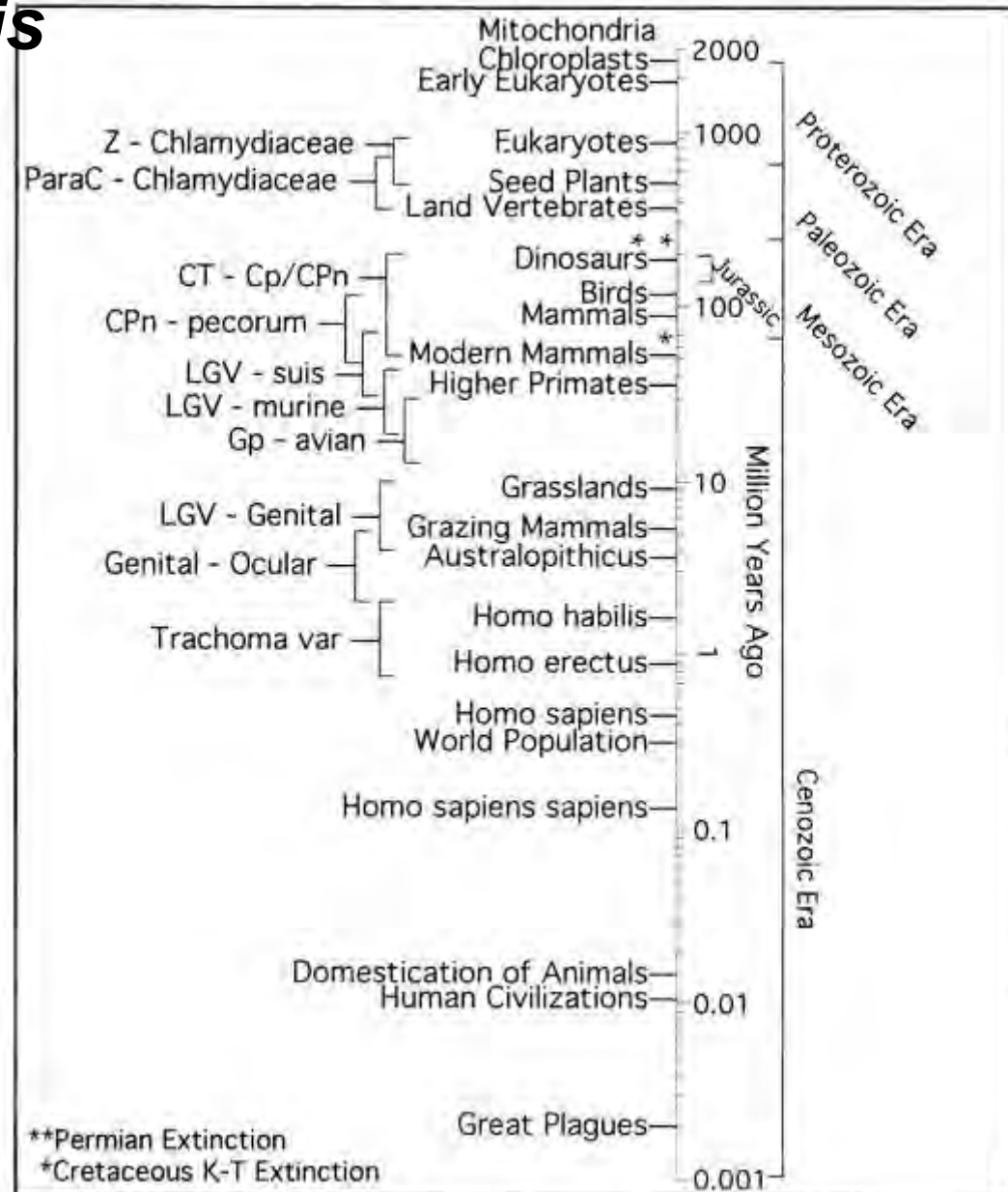
Chlamydia evolved
with the dinosaurs (200m)

C. trachomatis evolved
with the mammals (50m)

Trachoma biovars evolved
with early humans (1m)

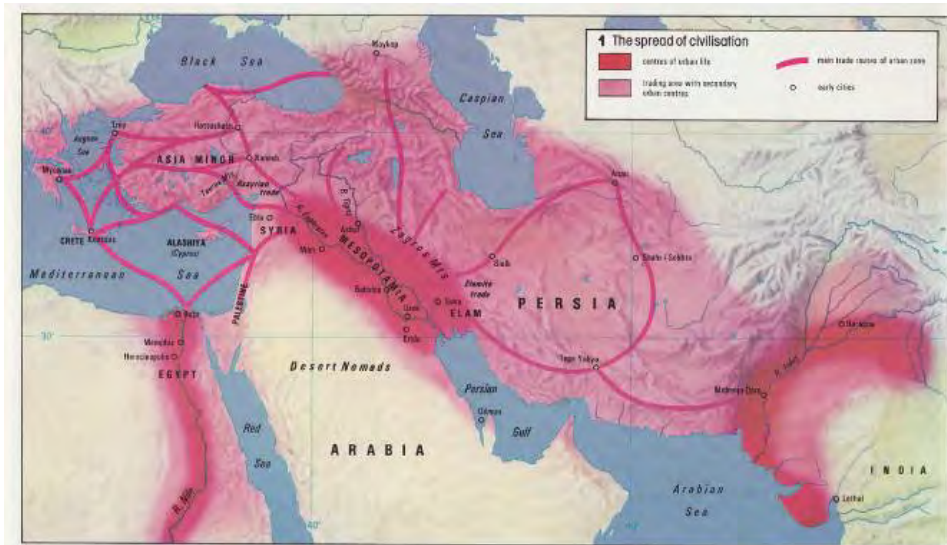
Modern man evolved
(1-200,000)

Trachoma and blindness
accompanies “civilization”
(10,000)



Trachoma and Civilization

- Hunter gathers in small mobile groups , ~18 people,
 - little opportunity to swap infected ocular secretions
- Farming and settlements, ~90 people,
 - started after the last Ice Age, about 8,000BC
- First settlements of >1,000 people about 4,000BC
- Poor hygiene and close proximity
 - favour repeated episodes of re-infection in these settlements
- Led to blinding trachoma

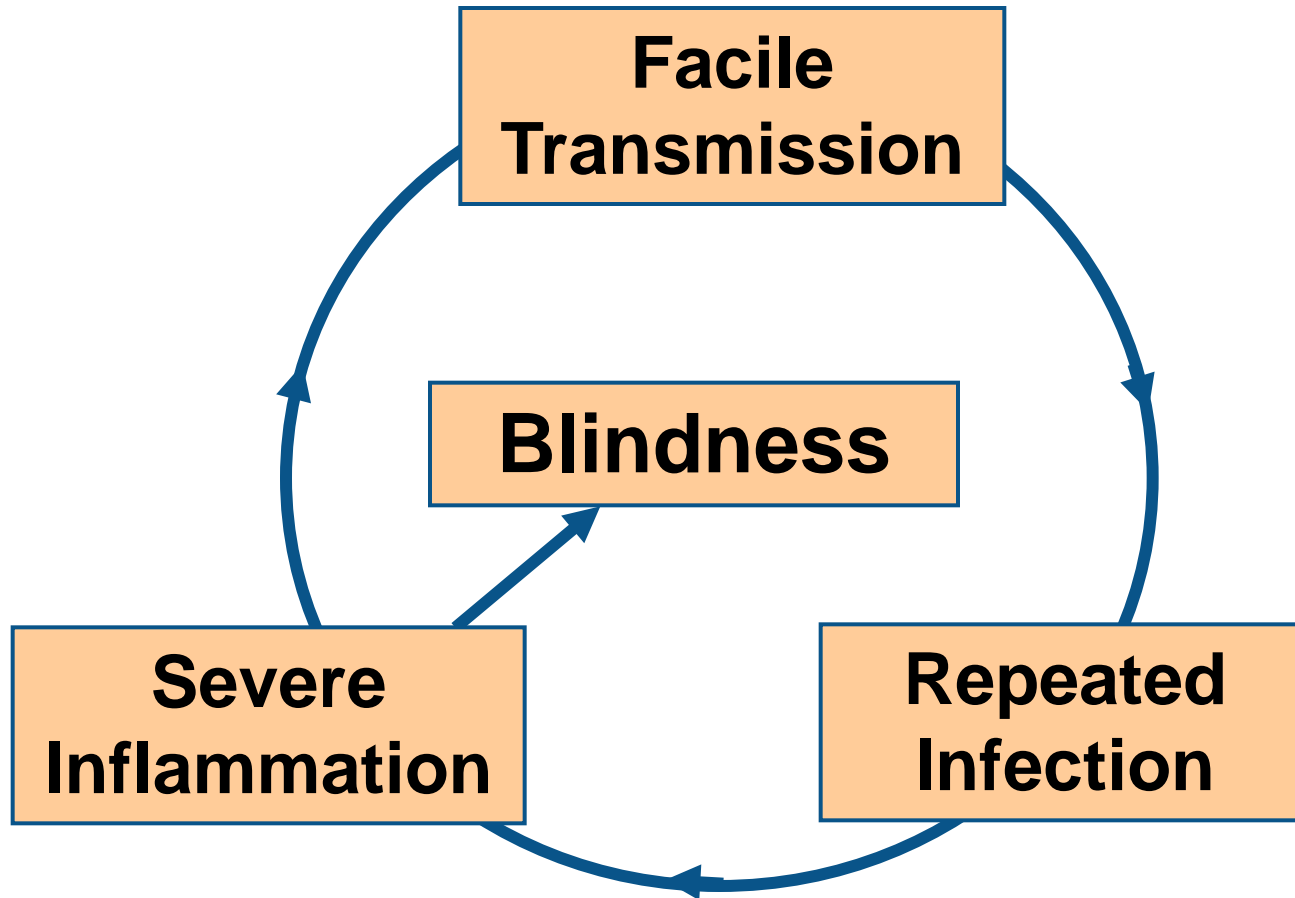


Trachoma comes to prominence in the 1800s

- Egyptian Campaign 1798-1802
French Army, within 8 weeks 35% had ophthalmia
British Army, 20% affected with 10% became blind
- Napoleonic Wars 1805-15, a weapon of mass destruction
~10% of British discharged blind,
14,000 Belgians blind or low vision,
25,000 Prussian,
80,000 Russian affected



Vicious Cycle of Trachoma



The Role of Reinfection

- A single infection gives Inclusion Conjunctivitis
- Repeated infection gives sustained disease
 - trachoma
- There is no real immunity
 - 150-200 episodes of reinfection needed to cause TT
- Most infection occurs in the first 10 years
- So children being reinfected 1 or 2 times a month!

- Every dirty face is a health hazard

WHO Global Elimination of Trachoma by 2020 GET 2020



CLEAN FACES, STRONG EYES!



THE SAFE STRATEGY TO ELIMINATE TRACHOMA



S

SURGERY

to correct Trichiasis
(in-turned lashes)



A

ANTIBIOTICS

to reduce
infection



F

FACIAL
CLEANLINESS

to stop
transmission



E

ENVIRONMENTAL
IMPROVEMENT

to give
safe bathrooms

Australian interest in F and E

- Trachoma risk communities
- Commonwealth Department of Health
- NTSCRG
- State/Territory Health Departments
- ACCHOs – AMSs
- University of Melbourne
- Fred Hollows Foundation
- QEII Diamond Jubilee Trust
- Environmental health practitioners
- Rotary
- Soap Aid

F and E

- Health hardware – what is provided
- Health software – what is practised

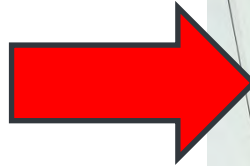
Healthy living practices

- Washing people, kids
- Washing bedding and clothes

Health hardware

Plumbing repairs and maintenance

- WA Aboriginal environmental health workforce recognised
 - Employed as EH practitioners
 - Certificate 2 skillset
 - Remote community application











Tap washers replaced
(above)

Tap reseated (left)

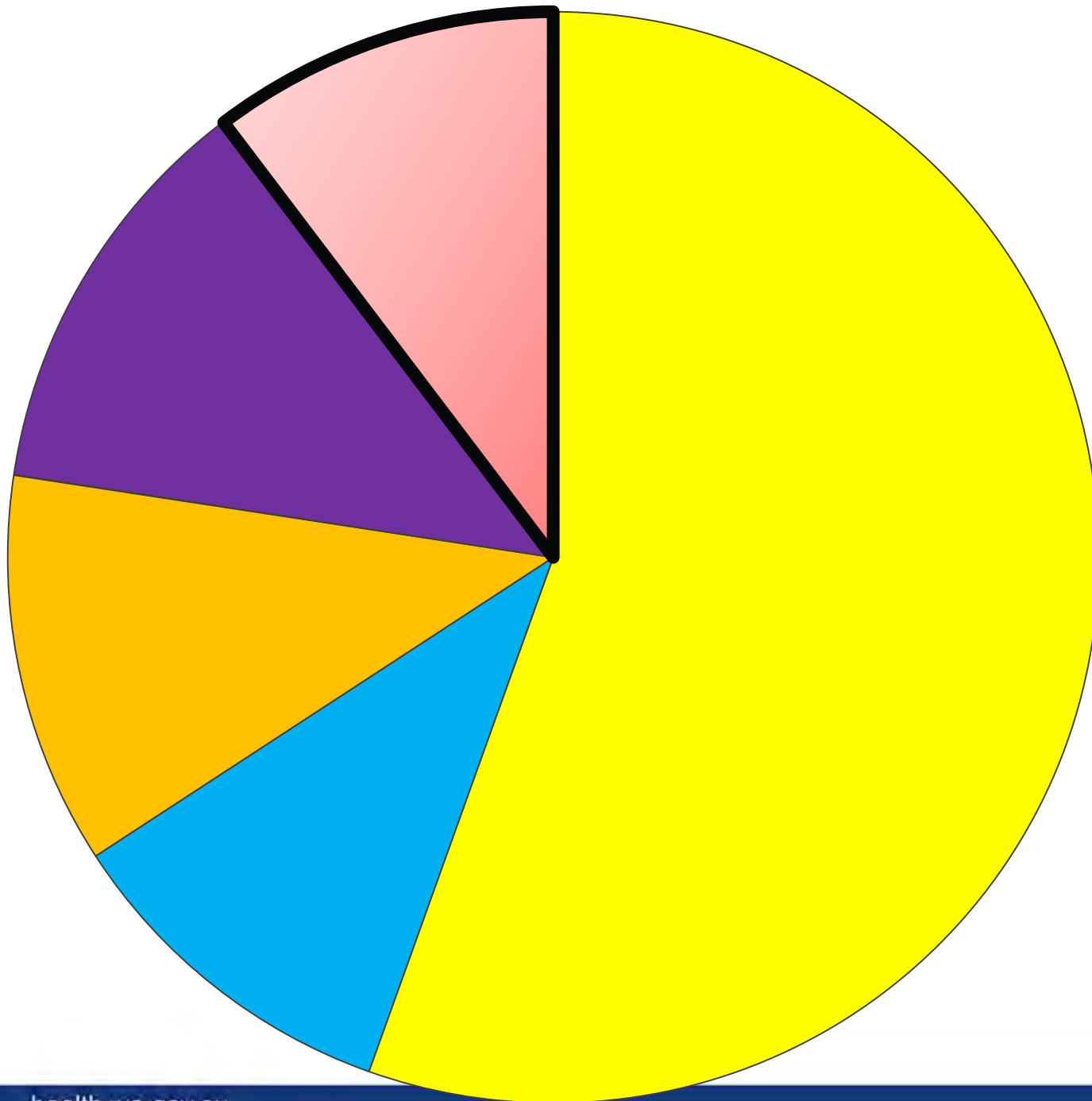
FHBH Beagle Bay 2010

Plumbing issue		33 homes
Shower	tap	13
	rose	15
Basin	tap	11
	spout	6
Drain	shower waste	7
	floor waste	12
Toilet	inlet	7
	cistern	11
Laundry	tap	14
Kitchen	tap	25
	spout	10
	drain	8
Yard	tap	23

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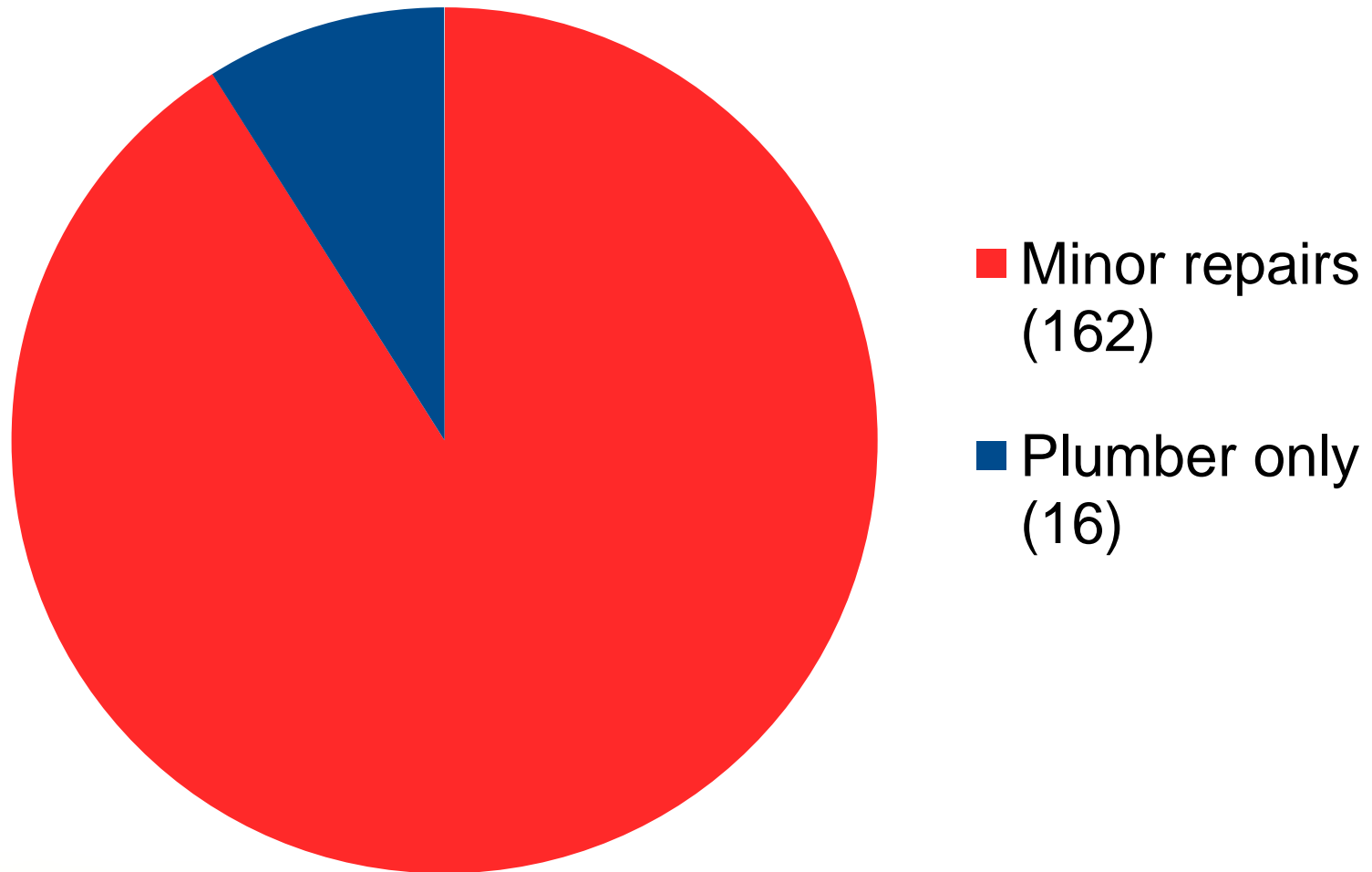
Gas related	4
water meter	3
Water pressure	2
isolation valve	6
septic lid	1

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- Tap
- Spout
- Toilet
- Drain
- Plumber

Plumbing repairs



Health software



Face washing
self check for
kids



New sticker
for WA



Didya wash ya face and hands?



1 Water & soap



2 Wash hands



3 Wash face



4 Rinse



5 Dry

Clean face = Strong Eyes



didya wash ya hands?



1 water



2 soap



3 rub 20 seconds



4 rinse



5 dry



Funded with the assistance of the Commonwealth Department of Health and Ageing. For more information visit www.nt.gov.au/health

Didya wash ya face and hands?



1 Water & soap



2 Wash hands



3 Wash face



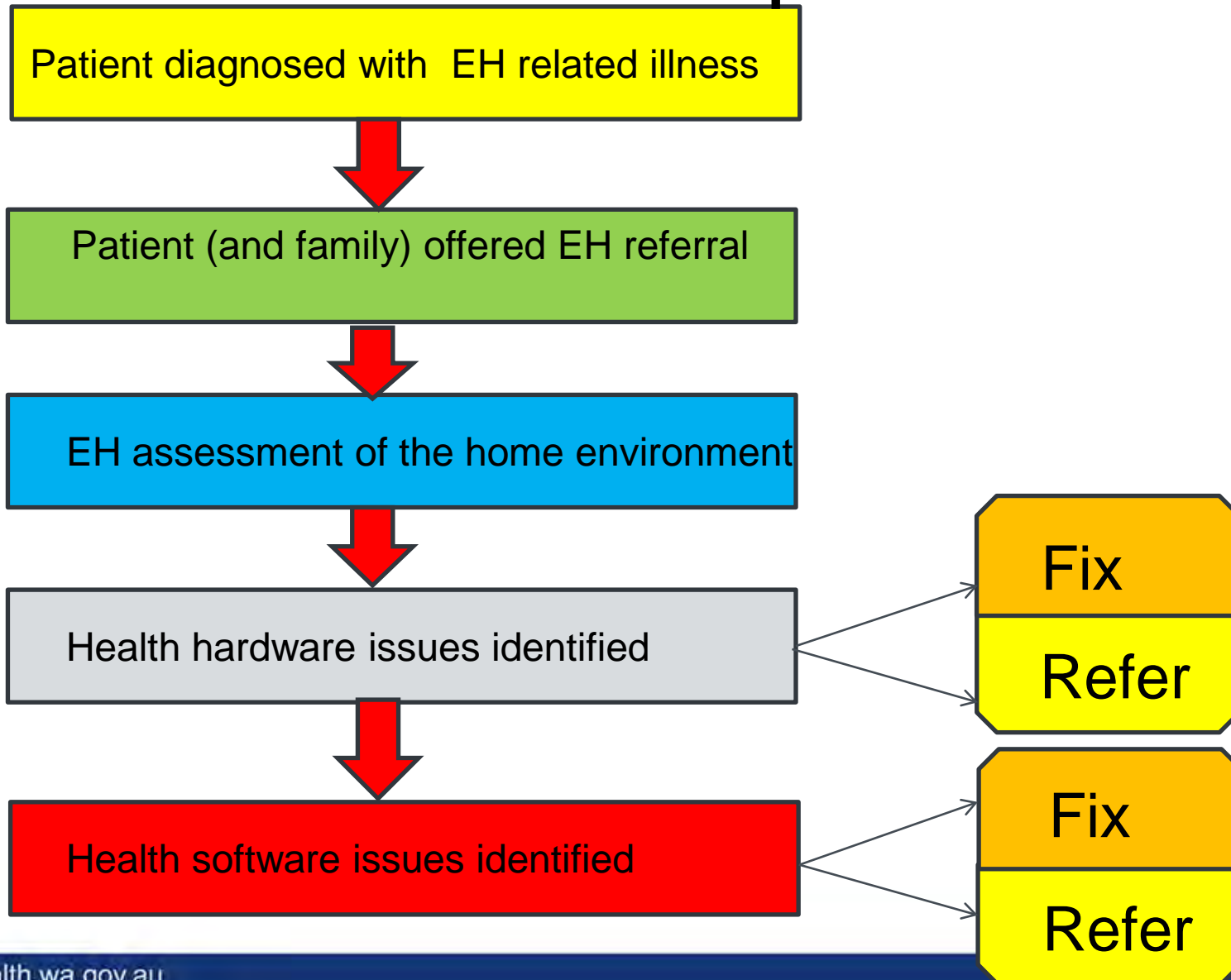
4 Rinse



5 Dry

Clean face = Strong Eyes

EH referral process



Developing sustainable E practices

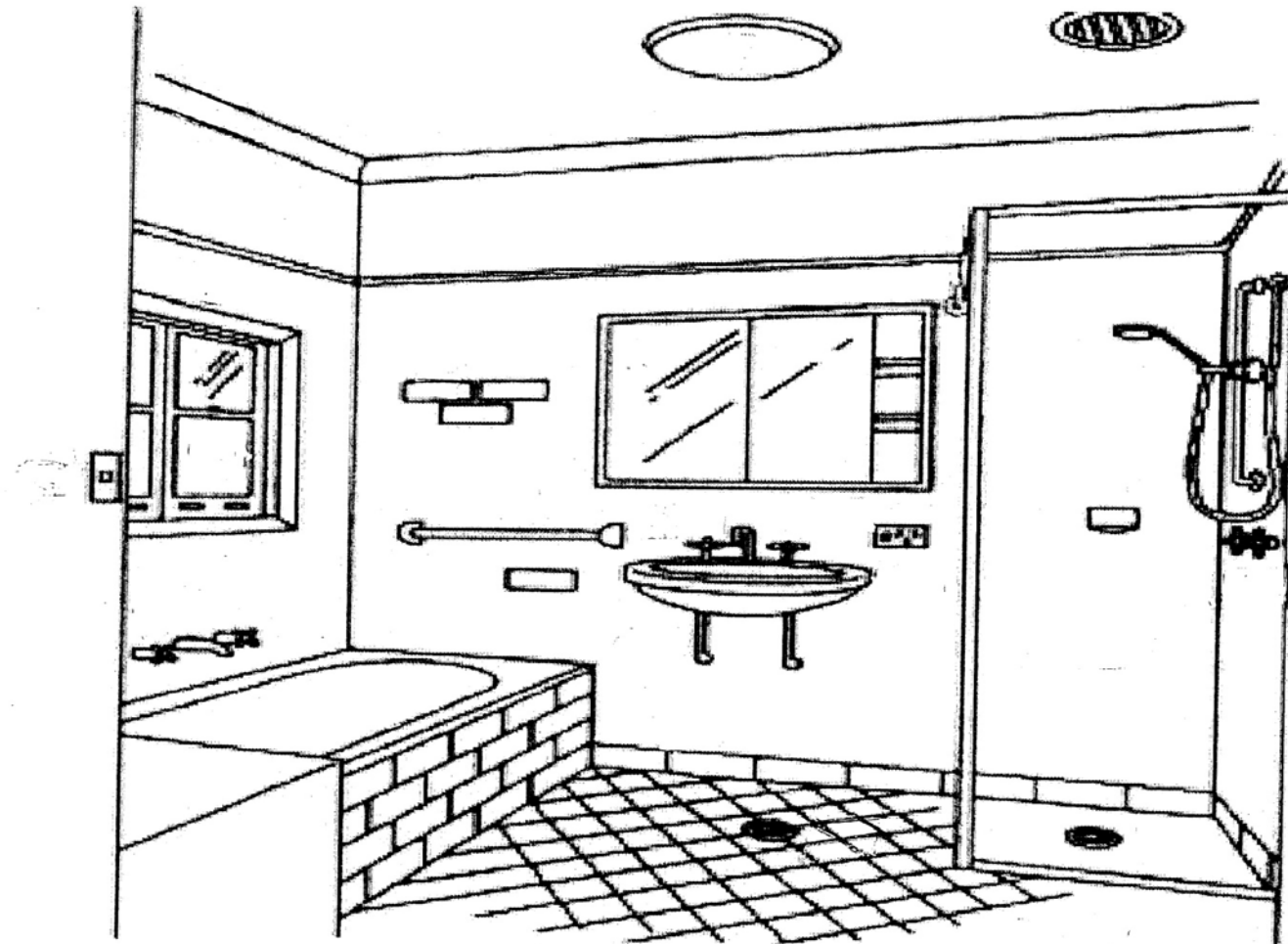
41 'at risk' communities in WA

Safe bathrooms

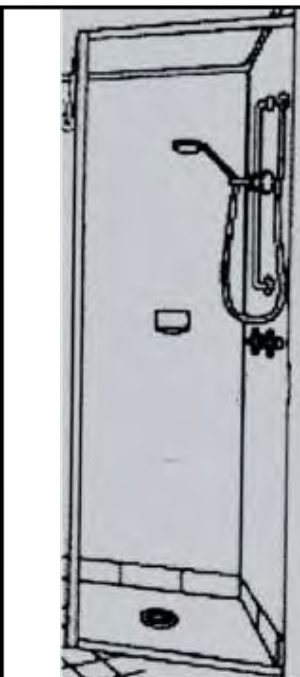
Squeaky clean kids

Face washing

WA Aboriginal Environmental Health Program Safe Bathroom Checklist



Item (diagram)	Bathroom item	Issue	Yes No (please circle)	Notes	EHP action (please circle)	Referral to Housing agency (date)
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Shower taps	Hot tap	Yes No		Fix	Replace	Clean
	Cold tap	Yes No		Fix	Replace	Clean
Water flow	Hot water	Yes No		Fix	Replace	Clean
	Cold water	Yes No		Fix	Replace	Clean
Shower rose	Does it work?	Yes No		Fix	Replace	Clean
Shower drain	Grate	Yes No		Fix	Replace	Clean
	Drain works	Yes No		Fix	Replace	Clean
Soap holder	Soap holder	Yes No		Fix	Replace	Clean



Hand basin	Basin is safe	Yes No		Fix	Replace	Clean
Basin taps	Hot tap	Yes No		Fix	Replace	Clean
	Cold tap	Yes No		Fix	Replace	Clean
Water flow	Hot water	Yes No		Fix	Replace	Clean
	Cold water	Yes No		Fix	Replace	Clean
Basin cabinet	Cabinet is present	Yes No		Fix	Replace	Clean
	Cabinet is functional	Yes No		Fix	Replace	Clean
Drain	Drain works	Yes No		Fix	Replace	Clean

- How many people use this bathroom ?
- How many towels are there ?
- How many places to hang towels are there ?

Soap holders installed in the shower
 basin

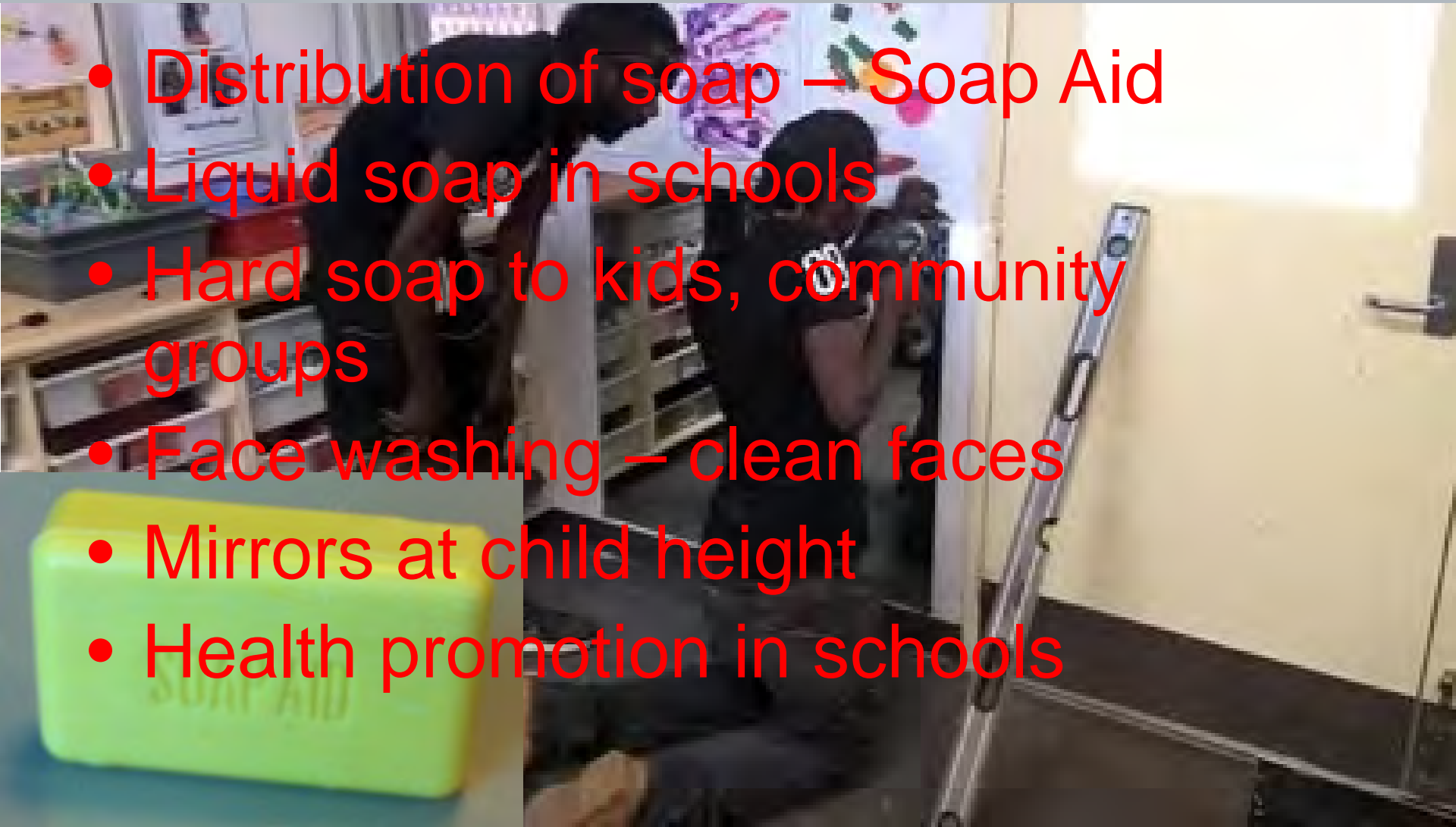
Towel hanging installed rails (number)
 hooks (number)

Soap provided

Number of bars _____

Squeaky clean kids

- Distribution of soap – Soap Aid
- Liquid soap in schools
- Hard soap to kids, community groups
- Face washing – clean faces
- Mirrors at child height
- Health promotion in schools



CLEAN FACES, STRONG EYES!



“Clean Faces, Safe Bathrooms”

“Every child with a dirty face is a health hazard!”



Transmission is Stopped by keeping every face clean



Developing sustainable E practices

– opportunities to expand

- Expand the assessment in the home
 - Kitchen
 - Laundry
 - Living spaces and bedrooms
- Expand the criteria for clinic referral
 - Any preventable contagious health condition
- Expand the program
 - Any community setting

Add-ons

- Community laundry facilities
- Mattress sealing/replacement
- Health promotion marketing
- CDP opportunities to combine
 - Mirrors
 - Towel rails

Trachoma the driver

– Preventable health improvement
the winner

-Health disparity the loser

- ARF/RHD
- APSGN
- Ear health
- URTI
- Skin health