

Functional Health Literacy of Parents when treating Childhood Fever



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Medicine use in children

- Over the counter medicines are commonly use
- Census data showed that 51% of caregivers reported giving a child an OTC medicine in the past 2 weeks
- Most commonly used medicine is acetaminophen

BACKGROUND

Childhood fever

- What is it?¹
 - A natural beneficial response to infections
 - Temperatures $> 38^{\circ}\text{C}$ with discomfort
- Management of fever¹

DO's

- Encourage fluids
- Dress lightly
- Reduce physical activity
- Antipyretics ?

DON'T'S

- Wet cloths
- Cold/tepid bath or showers
- Use 2 antipyretics
- Give inappropriate doses

Previous studies and the research gap

- **Misconceptions: Fever is harmful**
 - Detrimental effects (brain damage, organ damage, deaths)
- **Inappropriate practices**
 - Unnecessarily medicating, and alternating medications³
 - Topical methods alongside antipyretics
 - 23% of caregivers gave the right dose, and at the right interval⁴

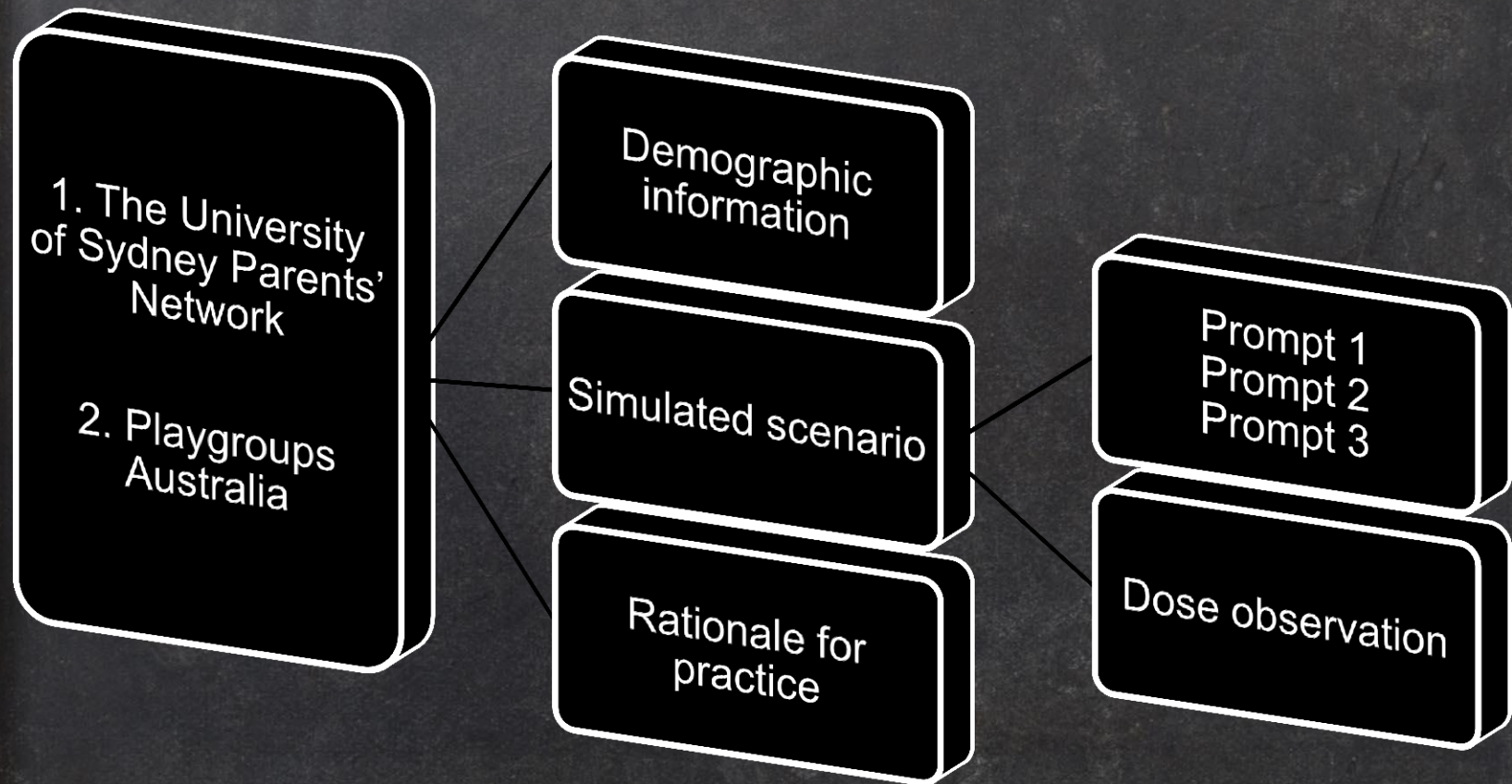
Why do caregivers engage in these practices?

Study Aim

Identify the practices taken by caregivers to manage fever, determine the **appropriateness** of these practices, and to uncover the **reasons behind** their management in the Australian paediatric population.

- **Specific objectives of the study**
 - To profile the **fever management practice** amongst caregivers
 - Quantify dosing **accuracy** rates
 - Explore caregivers' **reasons** for management outside recommended advice.

METHOD: Overview



The image displays a collection of over-the-counter painkillers and medical supplies. The products are arranged on a white surface, with some boxes standing upright and others lying flat. The items include:

- Demazin**: Cold relief colour free syrup (6 years - adult, 200 ml).
- Chemists' Own**: Children's Paracetamol Pain & Fever Suspension (5 - 12 Years).
- Dymadon**: Pain & fever relief.
- Panadol**: Strawberry Flavour, Children's (1-5, 5-12, 7+, 3+ years).
- Nurofen**: For Children.
- Advil**: Ibuprofen, Pain & Fever Relief (7 - 12 Years).
- Dimetapp**: DM ELIXIR, COUGH AND COLIC.
- Aspro Clear**: Regular Strength 300 mg, 24 tablets.
- Paracetamol Pain & Fever**: Several bottles.

In the foreground, there are several syringes (some orange, some clear), a blue plunger, and two metal spoons.

METHOD:

Simulated Scenario

› Part 1: Observation of a simulated scenario

Prompt 1: Your x year old feels very hot to touch. They are still eating, drinking, and playing. What would you do?

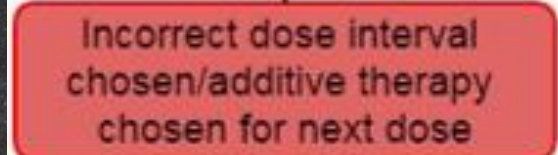
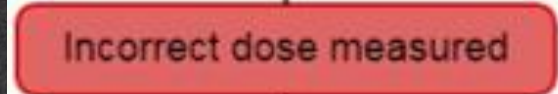
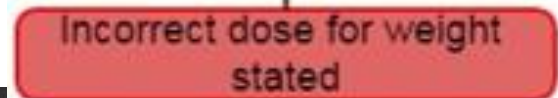
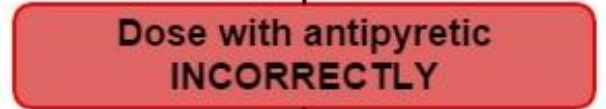
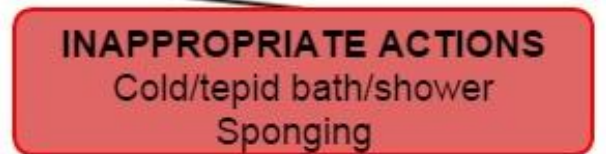
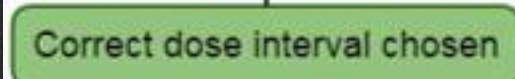
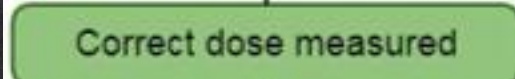
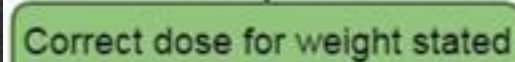
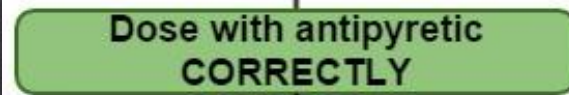
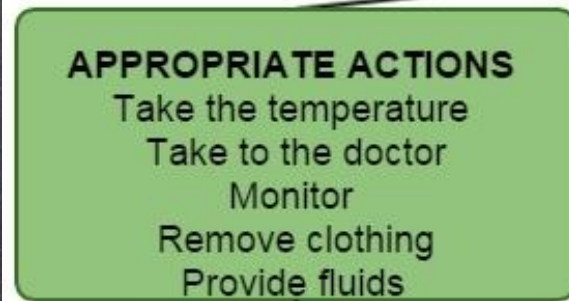
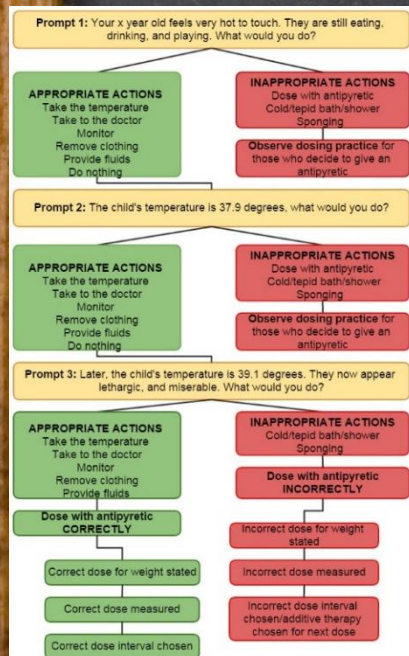
Prompt 2: The child's temperature is 37.9 degrees, what would you do?

Prompt 3: Later, the child's temperature is 39.1 degrees. They now appear lethargic, and miserable. What would you do?

Dose observation

METHOD: Simulated Scenario

› Part 1: Appropriateness algorithm⁴



i) Analysis

- SPSS® statistics
- Descriptive statistics

Uncovering the rationale

- Part 2: Interview
- Semi-structured face-to-face interview were conducted
- Questions asked pertain to actions of caregivers during part 1 of the study

“You chose to give a dose of 9mL -can you tell me how you came up with that dose?”

Analysis

- Interviews were transcribed verbatim
- Coded into themes using Nvivo®

RESULTS

- 101 caregivers were recruited
- Characteristics of participants:

Caregiver

- Median age = 39 years (IQR = 39 – 43)
- 85% were the mother
- 85% had a university degree
- High socio-economic status

Child

- Median age = 2 years (IQR = 1 – 2)
- Mostly first born or second born

RESULTS



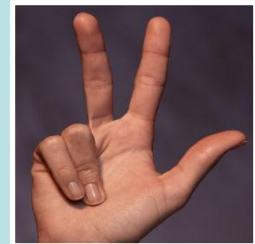
(n = 101)

- 73% took a temperature
- 34% monitored
- 8% did nothing
- 0% saw the doctor
- 0% medicated



(n = 101)

- 42% monitored
- 29% did nothing
- 22% medicated
- 0% saw the doctor



(n = 79)

- 98% medicated
- 37% saw the doctor
- 0% did nothing



Number of caregivers used topical methods, gave fluids, and encouraged rest

RESULTS

Dosing observation

83% used a syringe

55% stated a correct dose

87% measure their intended dose

72% used the same medication

97% dosed at correct intervals

Overall, 33% correctly dosed

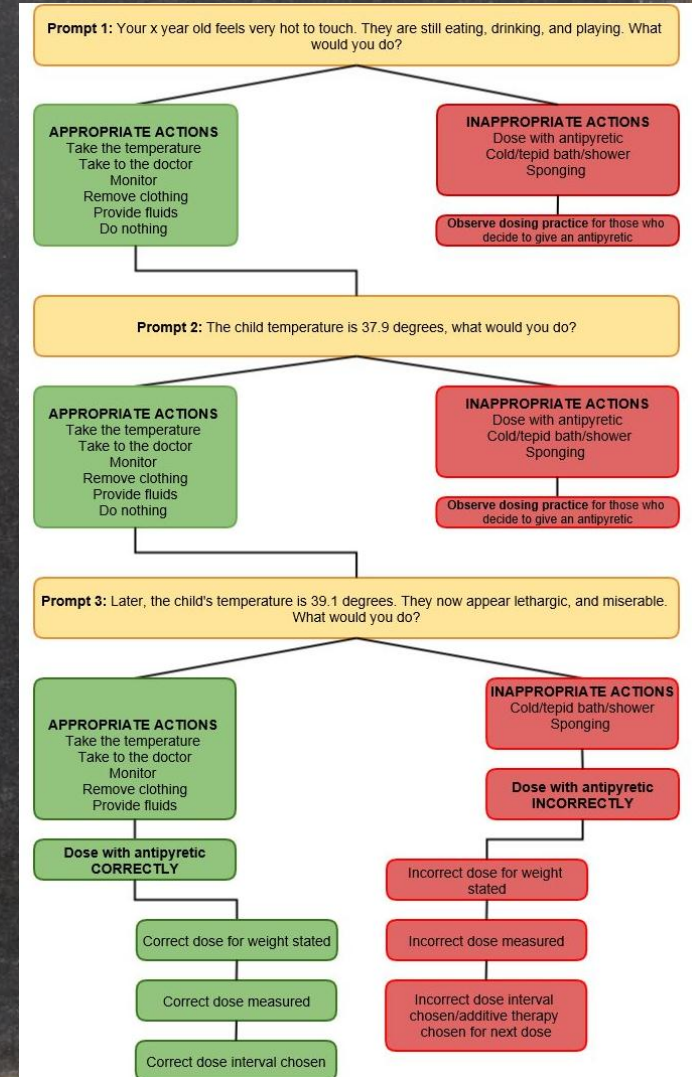
RESULTS

Appropriateness of treatment

– Overall, 15% of caregivers had appropriate management

– Common errors:

- Dosing at prompt 2
- Using wet cloth
- Bathing/showering
- Inaccurate doses
- Using 2 medications



RESULTS

Understanding caregivers' practices



RESULTS

Understanding caregivers' dosing practices

Why did you choose this dose?

*"I'd rather **veer on the lower dose**... 25 kilos he could actually have **8 mL**... I go alright, his age, **6 mL**, let's go actually **a little bit lower than that**, I'm aiming for the **5 mL**"*

*"If it **got worse** I might consider giving a **maximum dose** on the second medication"*

Age	Average Weight	Dose
5 - 6 Years	18 - 20 kg	6 ml
6 - 7 Years	20 - 22 kg	6 - 7 ml
7 - 8 Years	22 - 25 kg	7 - 8 ml
8 - 9 Years	25 - 28 kg	8 - 9 ml
9 - 10 Years	28 - 32 kg	9 - 10 ml
10 - 11 Years	32 - 36 kg	10 - 11 ml
11 - 12 Years	36 - 41 kg	11 - 13 ml

IN SUMMARY

- Caregivers' fever management practices
 - 15% correctly managed the scenario
 - 33% of caregivers dose correctly
- Future directions
 - Develop and trial an educational intervention to target caregiver's concerns
 - Education may also be needed for health professionals
 - Improve product labelling to avoid drug misadventure

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