

## What is the best way to measure the health of kids?

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### 1. Why did we do this study?

Each year, researchers and doctors work to find better tests, treatments, and services for children. They often use questionnaires that ask about a child's health to understand how these medicines, treatments and services improve children's lives. Sometimes it can be hard to know how well these questionnaires measure problems and improvements in child health.

We hope to better understand which questionnaires we should be using to measure the health of children in future. The results of this work may help us to better understand how well medicines, treatments and services are working to improve the health of children in the future.

### 2. What were our aims?

- To understand how easily the various child health questionnaires can be filled out by parents or children and how well they measure problems and improvements in child health.
- To understand which child health questionnaires we should be using to measure the health of Australian children in research and clinical care.

### 3. What did we do?

We designed a study that compared different child health questionnaires (we call the study a 'multi-instrument comparison study').

We asked over 7,200 Australian families who have children aged 2-18 years of age to take part in the study.

These families were asked to tell us a bit about their family, their child's health, and to complete several different child health questionnaires. They were also asked to repeat the child health questionnaires in a follow-up survey. This study included the following child health questionnaires: CHU9D, PedsQL, EQ-5D-Y (3L and 5L), EQ-5D-5L, EQ-TIPs, AQoL-6D, PROMIS-25, and HUI2/3. We asked lots of different families across Australia to take part in the study, including those with well children and children with different health conditions.

Their answers allow us to work out how easily the different child health questionnaires can be filled out by parents or children and how well they measure problems and improvements in child health (i.e. acceptability, feasibility, reliability, responsiveness, validity and sensitivity). We were also able to see if some child health questionnaires were better suited to children of different ages or with different health conditions.

**Here is a visual summary of what we did:**

 <b>WHO TOOK PART?</b>	 <b>WHAT INFORMATION DID WE COLLECT?</b>	 <b>HOW DID WE ASSESS THE CHILD HEALTH QUESTIONNAIRES?</b>
<p>Over 7,200 Australian children aged 2-18 and their parents, including:</p> <ul style="list-style-type: none"> <li> Children attending a paediatric hospital in Melbourne, Australia</li> <li> Children from the Australian general population (able to complete the survey in English)</li> <li> Children with 11 different health conditions.</li> </ul>	<p><b>Initial survey:</b></p> <ul style="list-style-type: none"> <li>• Questions about the child's family,</li> <li>• Questions about the child and their health, and</li> <li>• Child health questionnaires.</li> </ul> <p><b>Follow-up survey:</b></p> <ul style="list-style-type: none"> <li>• Questions about if the child's health has changed, and</li> <li>• Child health questionnaires.</li> </ul> <p> Children 7+ years completed the child health questionnaire themselves.</p>	<p>We used the following factors to assess if a child health questionnaire was good:</p> <ul style="list-style-type: none"> <li> Easy to complete</li> <li> Quick to complete</li> <li> Able to pick up on changes in a child's health over time</li> <li> Stable (or reliable) if there was no change in a child's health over time</li> <li> Able to tell the difference between well children and children with a health condition</li> </ul>

**4. What did we find?**

We were able to find out which child health questionnaires performed the best for different children.

Importantly, we discovered that no one child health questionnaire is the best for all children, and different questionnaires should be used for different children depending on their age or health condition.

**Here is a visual summary of what we found:**

 <b>WHICH CHILD HEALTH QUESTIONNAIRES SHOULD WE USE TO MEASURE THE HEALTH OF CHILDREN?</b>			
 <p>In a <b>broad group of children aged 5-18 years</b>, the following child health questionnaires performed the best: <b>EQ-5D-Y-5L and CHU9D.</b></p>	 <p>In a group of children with <b>mental health challenges</b>, the following child health questionnaires performed the best: <b>PedsQL, CHU9D and EQ-5D-Y-3L.</b></p>	 <p>In a group of children with <b>seven different ongoing health conditions</b> the child health questionnaires that performed the best were different for each condition. Overall, <b>all questionnaires performed well.</b></p>	 <p>In a group of <b>children aged 2-4 years</b> of age, the following child health questionnaires performed well: <b>PedsQL, CHU9D, EQ-TIPS, and EQ-5D-Y-5L.</b></p>

**About QUOKKA:**

QUOKKA (Quality of Life in Kids: Key Evidence for Decision Makers in Australia) is a research programme funded by the Medical Research Future Fund. It comprises six main research projects. Briefings for all projects are available on our website: <https://www.quokkaresearchprogram.org> Want to know more? Contact us by email: [quokka-research@unimelb.edu.au](mailto:quokka-research@unimelb.edu.au) We're on Twitter: [@QUOKKA\\_Research](https://twitter.com/QUOKKA_Research)