

# We developed a tool to optimize drug use in neonatology

## The NeoCheck Project: Development of a Prescription-screening Tool Specific to Neonatology

Thomas Rudolf von Rohr<sup>1,3</sup>, Roberta de Luca<sup>2</sup>, Pascal Bonnabry<sup>1,3</sup>, Riccardo Pfister<sup>2</sup>, Caroline Fonzo-Christe<sup>1,2</sup>

<sup>1</sup>Geneva University Hospitals, Pharmacy, Geneva, Switzerland.

<sup>2</sup>Geneva University Hospitals, Neonatology and Pediatric Intensive Care Unit, Geneva, Switzerland.

<sup>3</sup>Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Geneva, Switzerland

### Potential uses of the tool:



Optimization of prescriptions



Young physicians and pharmacists training



Basis for developing institutional guidelines

### Literature review

- 1375** 1375 recommendations on neonatal pharmacotherapy were identified by a large literature review. Main sources: AAP, CPS, ESN, NICE, Cochrane Neo.
- 328** Recommendations on same topics were gathered and merged.
- 228** Recommendations were presented to an expert during interviews to eliminate the incorrect, irrelevant and unuseful ones
- 158** Selection process by the steering group to keep only the most relevant topics and reduce the number of recommendations.

### 2020: prospective study on the impact of NeoCheck

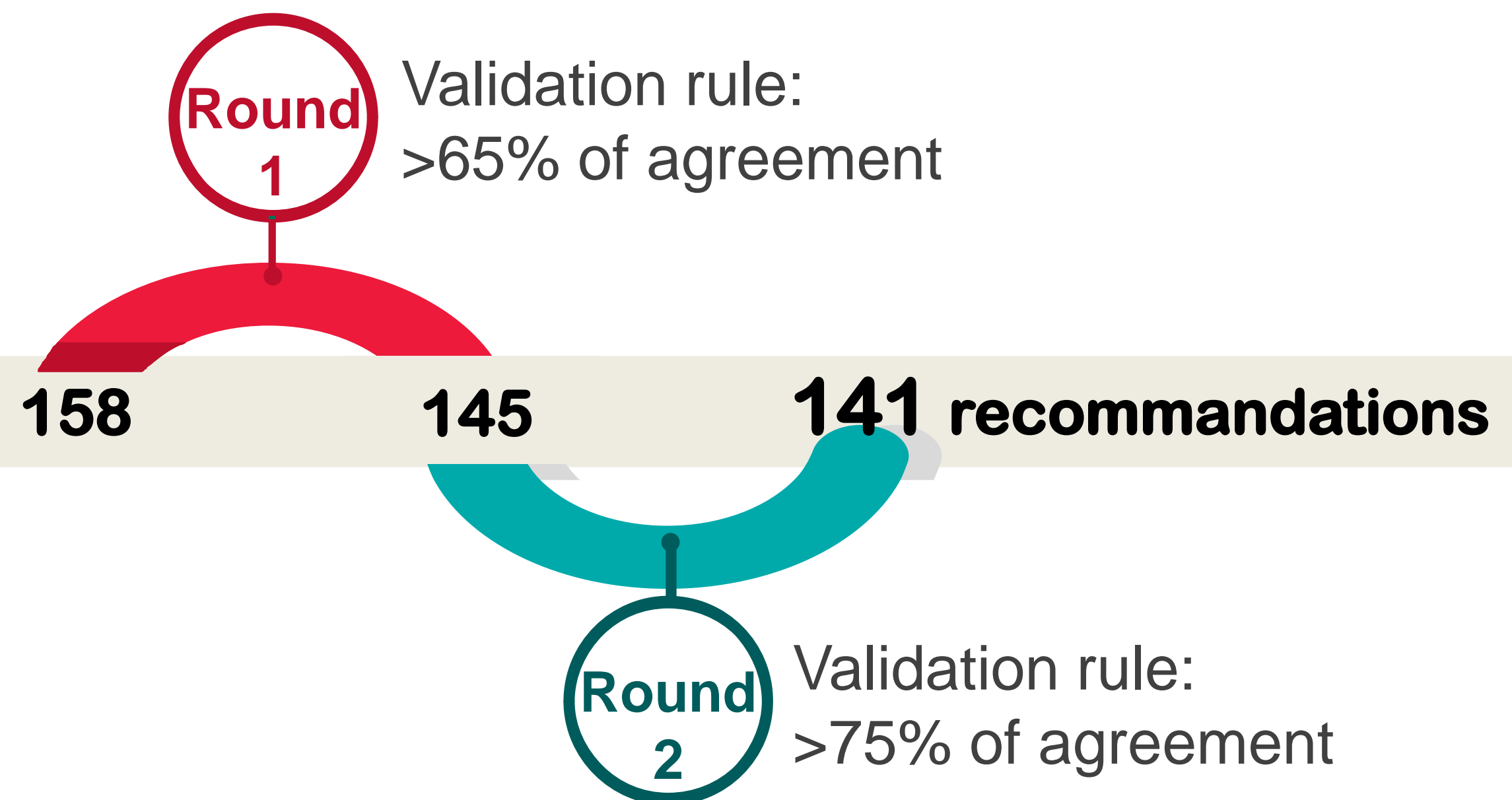
Start	<b>Start vitamin D supplementation from the first days of life in all neonates.</b>
	Recommended dose is 400 IU once daily during the first year of life and 600 IU once daily during the two next years.
	<b>Grade of recommendations: National Guidelines</b>

*L'Allemand D, Neuhaus TJ, Janner M, et al. Recommendations de l' Office fédéral de la santé publique concernant l' apport en vitamine D en Suisse – quelle signification pour le pédiatre? Paediatrica. 2012;23(4):22-24.*

Exemple of a NeoCheck recommendation

### 2-rounds Delphi Validation Method

• Online questionnaire answered by 23 swiss experts to assess their personal level of agreement\* with each recommendation:



\*What is your level of personal agreement with the recommendation?

1. Totally agree   
  2. Slightly agree   
  3. Nor agree or disagree   
  4. Slightly disagree   
  5. Totally disagree

= agreement

### NeoCheck chapters

Basic management	Nephrology
Cardiology	Neurology
Endocrinology	Pain, sedation & neonatal abstinence syndrome
Gastroenterology	Pharmacology
Hematology	Pneumology
Infectiology	

### Experts characteristics

<b>Profession</b>	
Neonatologists (MD with <i>Schwerpunkt Neonatologie</i> )	22
Pharmacist	1
<b>Years of practice</b>	
>10 years	15
5-10 years	4
1-5 years	4

