

Paediatric Antibiotic Prescribing: How Paediatricians Navigate Diagnostic Uncertainty

Paediatrician perspectives on antibiotic prescribing under diagnostic uncertainty, caregiver expectations, time pressure, delayed prescriptions, follow-up, and antimicrobial stewardship. This report moves from the central clinical question to the evidence, the pattern behind it, and the practical implications for care.

Context — Data — Insight — Impact

98

Complete responses

6

Countries represented

10

Closed-ended findings

74.2%

Completion rate

THE CLINICAL QUESTION

How are paediatricians navigating antibiotic decisions when early symptoms and follow-up remain uncertain?

The responses describe a safety-netted stewardship pattern rather than automatic prescribing. Most paediatricians maintain a conservative threshold, use symptomatic care when bacterial infection is not supported, and rely on monitoring, caregiver counselling, and selective delayed prescriptions.

The pressure point is not uncertainty alone. Prescribing begins to shift when diagnostic ambiguity combines with fear of missing complications, unreliable follow-up, caregiver anxiety, or limited time to explain the plan.

The report examines where the threshold holds, where it bends, how caregiver expectations and workload are managed, and how delayed prescriptions function inside a broadly conservative prescribing environment.

Countries covered: United States, United Kingdom, Canada, France, Italy, Germany. The survey included paediatricians from the United States, United Kingdom, Canada, France, Italy, and Germany.

EXECUTIVE SUMMARY

What the data is showing

FINDING 01

54.1% rarely prescribe without a clear clinical indication

Stewardship remains the dominant self-described behaviour.

FINDING 02

35.7% rely on clinical judgement without prescribing when symptoms overlap

Observation is an active decision rather than an absence of care.

FINDING 03

35.7% monitor closely and delay the decision

Time and follow-up are used to improve diagnostic clarity.

FINDING 04

29.6% name fear of missing early complications as the main driver of non-ideal decisions

Safety concerns still create pressure toward earlier treatment.

01

SECTION 01

Most clinicians preserve the antibiotic threshold in uncertain respiratory illness

CONTEXT

Early upper respiratory symptoms in young children can be non-specific, and unreliable follow-up can make watchful management feel risky. The central decision is whether uncertainty justifies treatment or whether risk can be managed without antibiotics.

The survey shows a strong preference for symptomatic care and a greater concern about unnecessary use and resistance.

WHAT THE DATA SHOWS

Symptomatic management is selected by 76.2% in the scenario, while immediate antibiotics are selected by 2.0%. Resistance concerns dominate borderline decisions for 65.3%.

THE INSIGHT

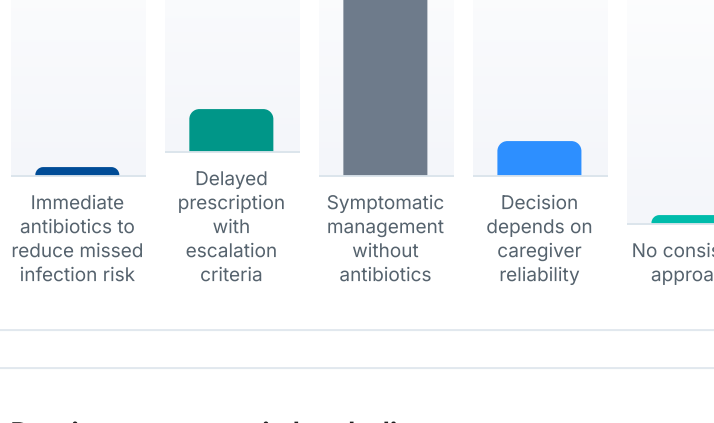
Paediatricians are treating uncertainty as a reason for better safety-netting rather than a default indication for antibiotics.

WHY IT MATTERS

The non-antibiotic plans described in the report typically include expected course, symptom relief, warning signs, and a route to reassessment.

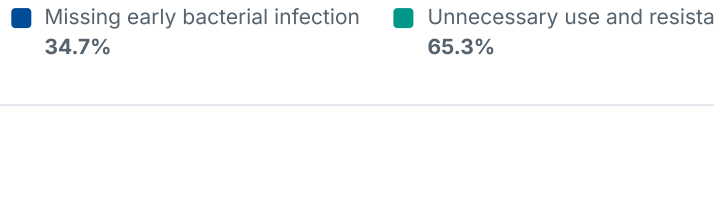
Approach to an inconclusive respiratory presentation

Percent of responding participants



Dominant concern in borderline cases

Percent of responding participants



02

SECTION 02

Prescribing behaviour is usually conservative, but the ideal is not always achievable

CONTEXT

Stewardship principles are translated through real consultations, where diagnostic ambiguity, follow-up, caregiver anxiety, and workload can change what is possible.

The survey distinguishes a generally conservative baseline from occasional deviation.

WHAT THE DATA SHOWS

Fifty-four point one percent rarely prescribe without a clear indication. Fifty-two percent say practice closely aligns with their ideal, while 35.7% occasionally deviate because of practical constraints.

THE INSIGHT

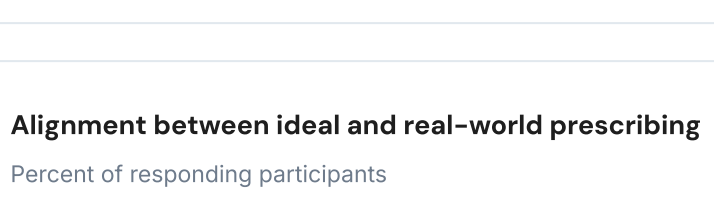
The stewardship gap exists mainly at the edges of practice rather than as the dominant behaviour of the cohort.

WHY IT MATTERS

The pattern locates deviation in poor follow-up, diagnostic uncertainty, and limited communication time rather than in a uniformly low prescribing threshold.

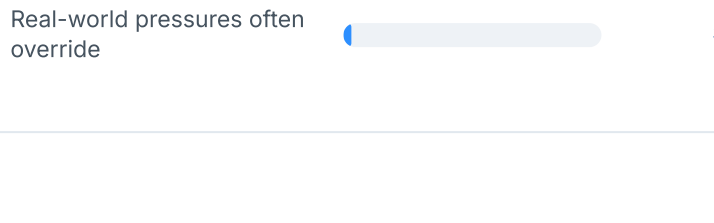
Actual prescribing behaviour in uncertain cases

Percent of responding participants



Alignment between ideal and real-world prescribing

Percent of responding participants



03

SECTION 03

Caregiver expectation is answered with explanation rather than automatic treatment

CONTEXT

A caregiver asking for antibiotics may be expressing fear about deterioration, concern about follow-up, pressure to return to work or childcare, or the belief that treatment is being withheld.

The survey shows that most paediatricians respond by spending more time, not by lowering the threshold.

WHAT THE DATA SHOWS

Seventy point four percent invest additional counseling time, 18.4% firmly avoid prescribing and reinforce the reasoning, and 11.2% offer a delayed prescription.

THE INSIGHT

The main clinical tool is a communication pathway that converts uncertainty into a shared plan.

WHY IT MATTERS

Practices need concise explanations, written safety-netting, and consistent messages that can be delivered without making the caregiver feel dismissed.

Response to caregiver expectation

Percent of responding participants



04

SECTION 04

Time pressure is a stewardship test, but not an automatic prescribing trigger

CONTEXT

Busy clinics can compress the history, examination, explanation, and safety-netting that support non-prescribing. A prescription can appear to be the faster option when uncertainty remains.

Most respondents say they maintain the same threshold despite this pressure.

WHAT THE DATA SHOWS

Sixty-three point three percent maintain the threshold, while 9.2% become more likely to prescribe when time is limited.

THE INSIGHT

The small but important time-pressure effect shows where workflow design can directly support stewardship.

WHY IT MATTERS

Decision support, team-based education, after-visit instructions, and reliable follow-up can reduce the perceived need to prescribe for operational reasons.

Prescribing under high volume or limited time

Percent of responding participants



05

SECTION 05

Overlapping symptoms are managed through judgement, monitoring, and follow-up feasibility

CONTEXT

Viral and bacterial illness can look similar early in the course. The clinician therefore relies on severity, trajectory, examination, testing where appropriate, and the ability to review the child if the picture changes.

The survey shows an even split between clinical judgement without prescribing and active monitoring.

WHAT THE DATA SHOWS

Clinical judgement without prescribing and close monitoring each account for 35.7%. When practice differs from ideal, fear of missing complications leads at 29.6%, closely followed by diagnostic ambiguity at 28.6% and unreliable follow-up at 25.5%.

THE INSIGHT

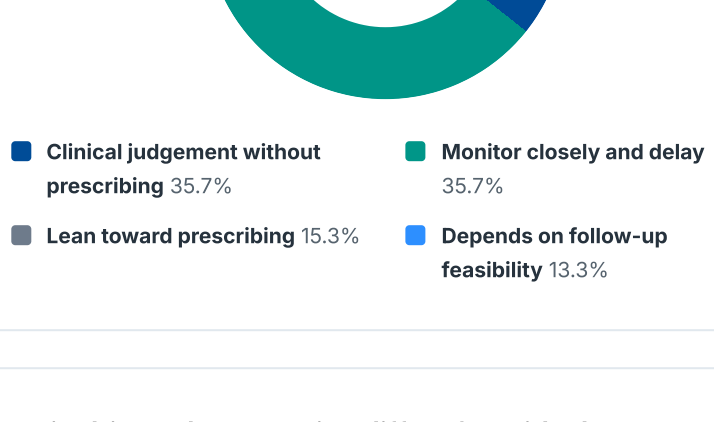
The difficult decisions are driven by what may happen after the consultation, not only by what is visible during it.

WHY IT MATTERS

Follow-up feasibility appears to function as part of the clinical assessment, with escalation criteria and access to reassessment influencing the final decision.

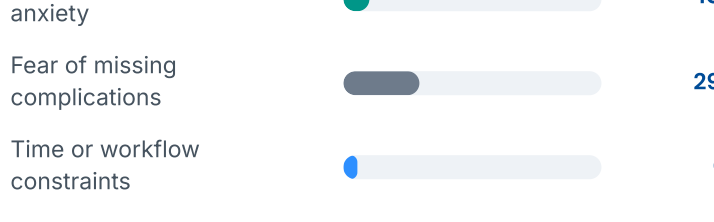
Approach when viral and bacterial symptoms overlap

Percent of responding participants



Main driver when practice differs from ideal

Percent of responding participants



06

SECTION 06

Delayed prescribing is used as a selective compromise within a broadly balanced environment

CONTEXT

A delayed prescription can reduce immediate antibiotic use while preserving a treatment route if the illness evolves. Its value depends on diagnosis, caregiver understanding, and the conditions attached to use.

The survey shows selective use within an environment most clinicians describe as balanced or conservative.

WHAT THE DATA SHOWS

Fifty-two percent use delayed prescriptions selectively. Eighty-four point seven percent describe local prescribing as balanced or generally conservative.

THE INSIGHT

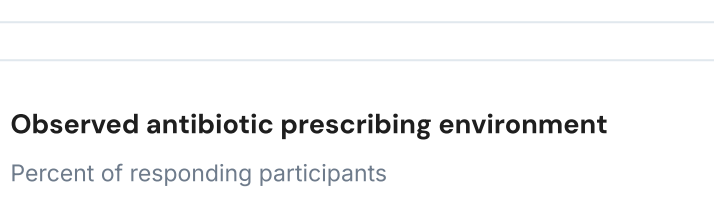
Delayed prescribing is being used as one tool in stewardship rather than as a substitute for diagnostic reasoning.

WHY IT MATTERS

In the responses, delayed prescribing is condition-specific and paired with instructions that distinguish a reserve option from automatic treatment.

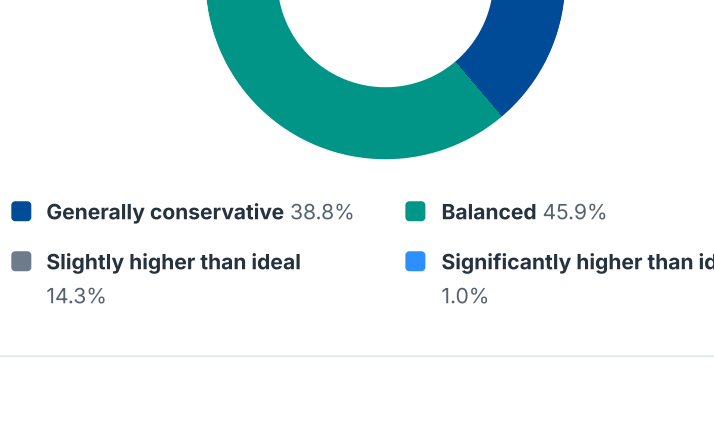
Use of delayed prescriptions

Percent of responding participants



Observed antibiotic prescribing environment

Percent of responding participants



PRACTICE PATTERN

What paediatricians' opinions reveal beneath antibiotic decisions

The combined findings show that paediatric antibiotic stewardship is being maintained through a wider care process, not through the prescription decision alone. Clinical judgement, monitoring, caregiver explanation, escalation criteria, and follow-up feasibility all sit behind the choice not to prescribe.

The hidden source of variation appears when those supports weaken. Diagnostic ambiguity, fear of missed complications, unreliable follow-up, caregiver anxiety, and time pressure can turn the same clinical uncertainty into a different practical decision.

Non-prescribing is an active management pathway

Pattern interpretation

The strong preference for symptomatic care suggests that paediatricians are not simply withholding treatment. They are replacing it with a safety-netted plan that makes uncertainty understandable and creates a route back to reassessment.

Communication carries part of the stewardship workload

Pattern interpretation

The time spent counselling caregivers shows that antibiotic restraint depends on explanation. The burden of stewardship may therefore be hidden in longer consultations, repeated reassurance, and the work of making a non-antibiotic plan feel clinically complete.

Delayed prescribing is a selective response to unresolved risk

Pattern interpretation

The moderate use of delayed prescriptions indicates that they function as a bridge in borderline cases rather than a default compromise. Their use appears linked to residual uncertainty, follow-up concerns, and the need to preserve caregiver confidence.

CLOSING PERSPECTIVE

The strongest antibiotic decision is a complete care plan

The survey shows that paediatricians generally resist the impulse to prescribe simply because the diagnosis is not yet clear. They are more likely to use symptomatic care, clinical judgement, monitoring, counseling, and selective delayed prescriptions.

That conservative threshold depends on the quality of the plan around it. Caregivers need to understand why antibiotics are not expected to help, what the normal course may look like, which signs require reassessment, and how quickly they can return if the child changes.

Antibiotic stewardship in paediatrics is therefore not only a prescribing policy. It is a communication and follow-up system that makes non-prescribing safe, understandable, and credible for the family.

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SELECTED EXTERNAL CONTEXT

- [CDC pediatric outpatient care](#)
- [NICE acute cough/antimicrobial prescribing](#)