

What is Acute Care Surgery?

Provides care for:

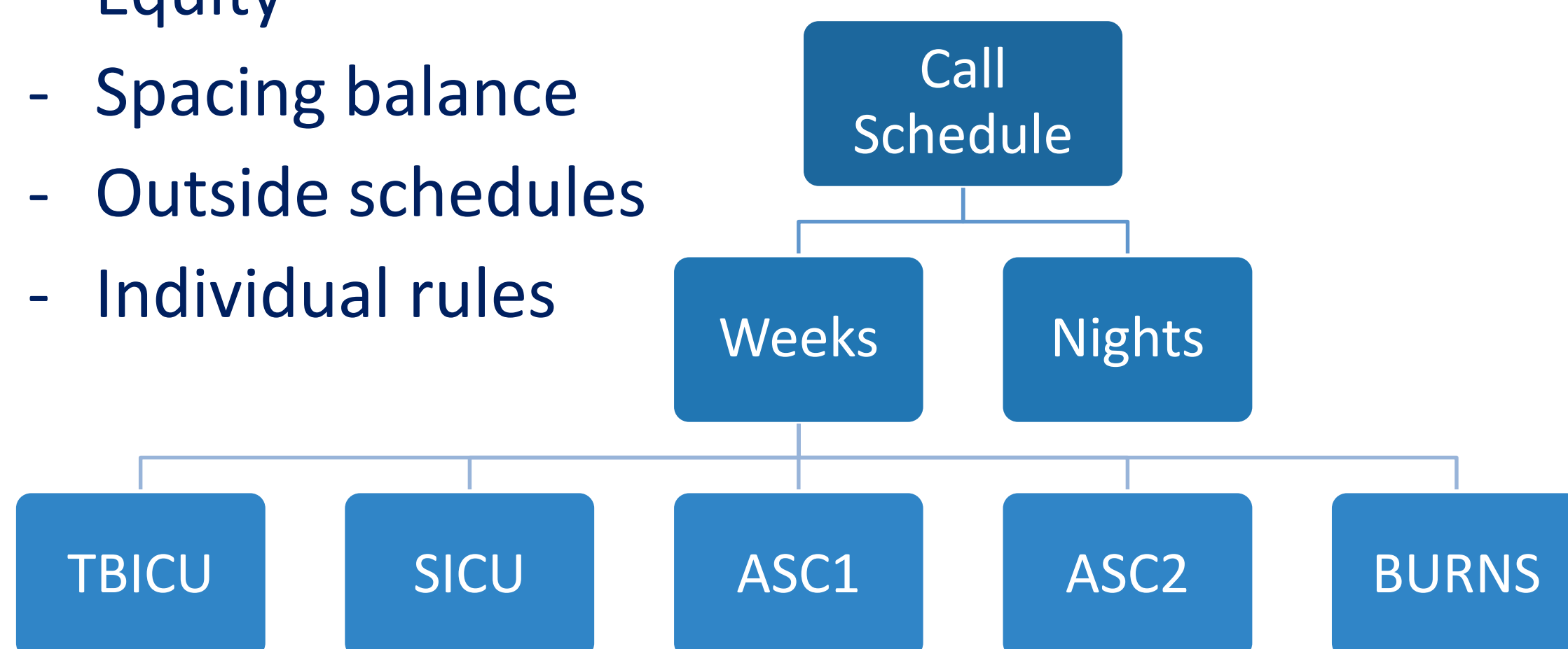
- critically ill/injured patients due to trauma/burn
- patients who need emergent medical attention

What is their scheduling challenge?

Objective: 5 units to be always covered by 15 attendings.

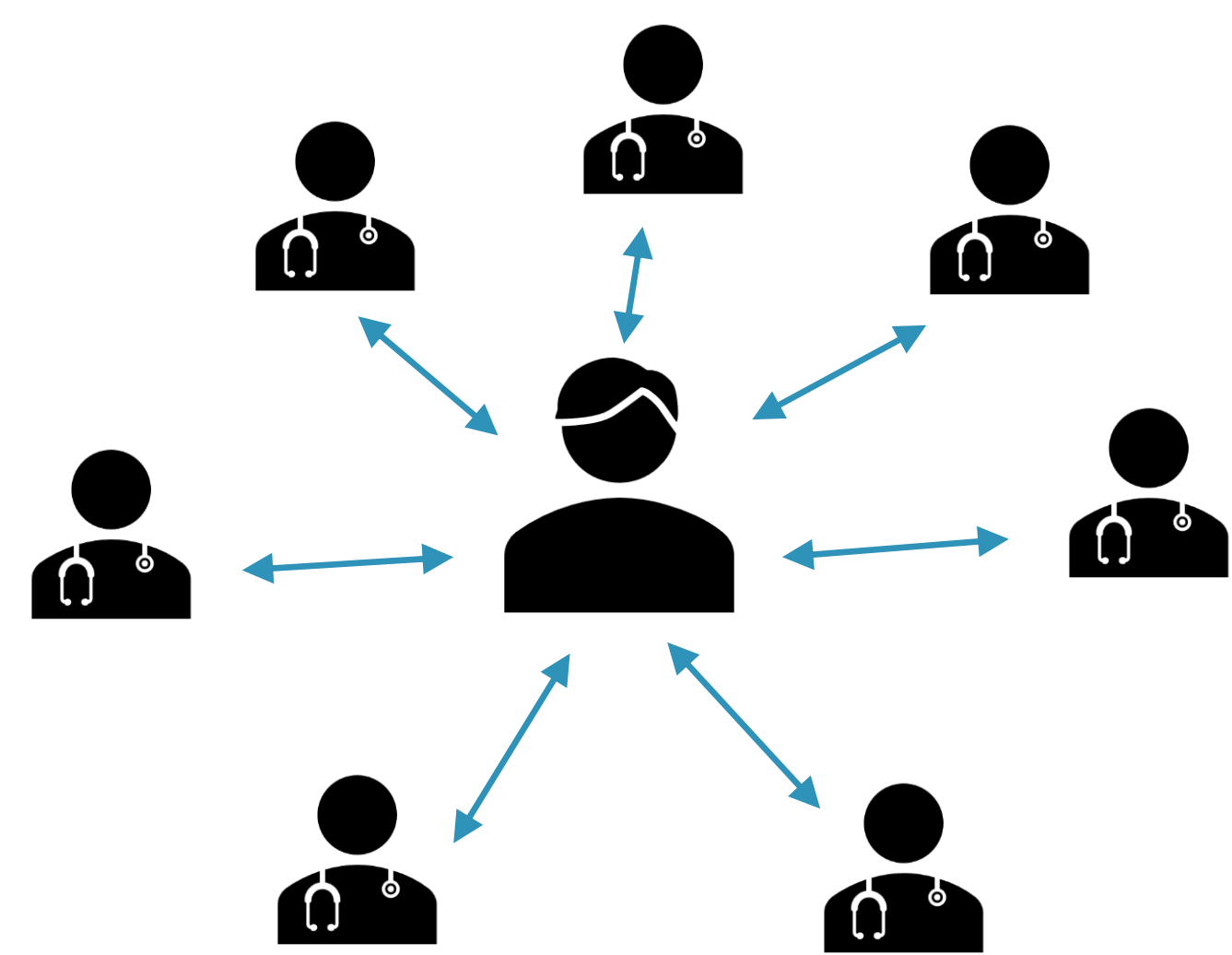
The schedule must consider:

- Personal/professional time-off requests
- Equity
- Spacing balance
- Outside schedules
- Individual rules



How do they schedule currently?

The Division Chief creates the schedule by hand.



**HIGH TIME AND EFFORT
LOW SATISFACTION**

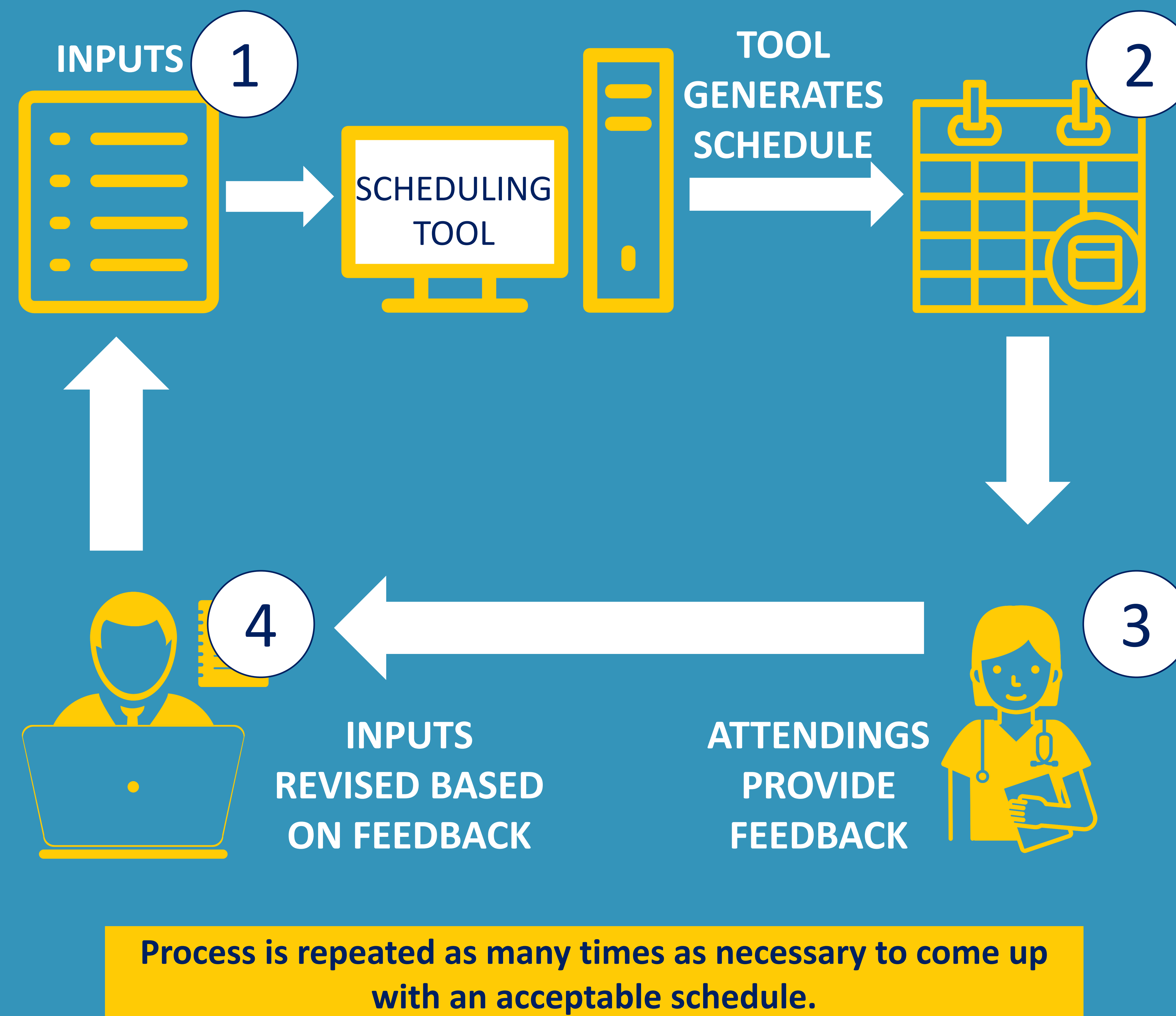
How can we help?

Our team has created a tool that automates and optimizes the scheduling process! The tool...

- Applies a mathematical model to enforce scheduling rules and identify the best possible schedule based on chosen criteria
- Generates high quality schedules within seconds
- Reduces the time and work involved with revising the schedule

Constructing Balanced Call Schedules for an Acute Care Surgery Practice

William Pozehl, Prof. Amy Cohn, Dr. Krishnan Raghavendran



How does the tool work?

1. Inputs – Gather inputs such as attending's time-off requests and target number of assignments on each unit
2. Tool generates schedule – Users just need to hit "run"!
3. Attendings provide feedback
4. Inputs revised based on feedback

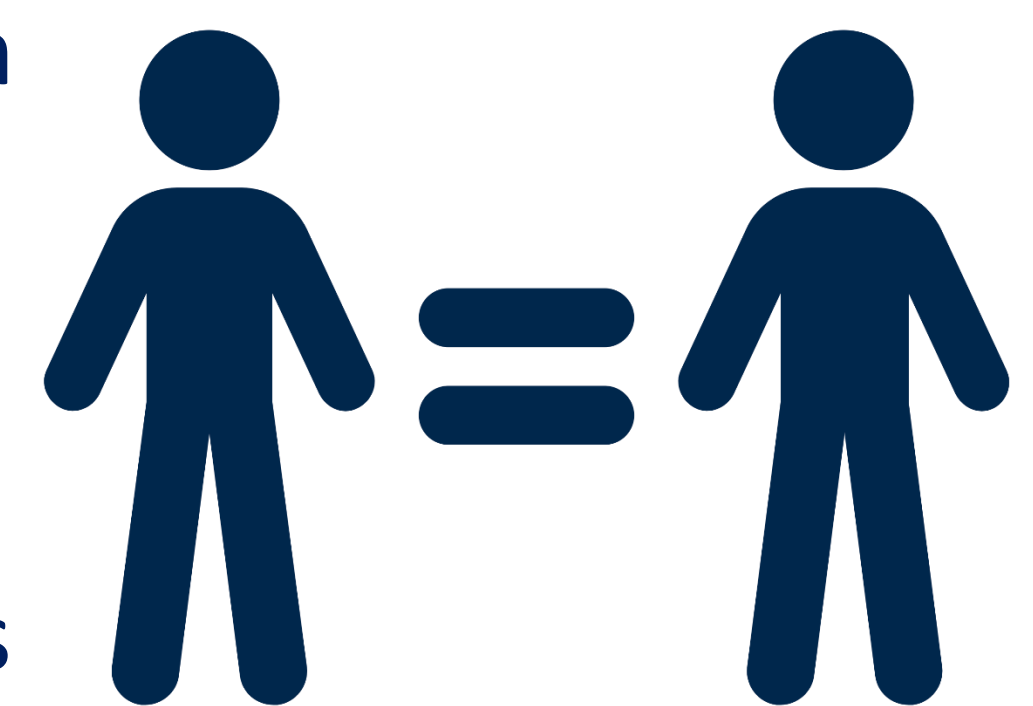
What are the short-term goals?

- Building many schedules in a short amount of time
- Obtaining rapid feedback and getting a better understanding of trade-offs within schedules.
- Increasing usability of the tool
- Reducing amount of manual work time
- Increasing clarity on schedule preferences



What are the long-term goals?

- Removing the perception of bias in scheduling, ensuring equity
- Equity spanning years with holiday assignments



Acknowledgements