

## EXECUTIVE SUMMARY

### Objective

Outline product and business model aimed at helping urologists and their patients in gathering and analyzing patient experience data logs.

### Goals

Define product parameters, and business server capabilities leading to several possible deliverable professional aides for service providers.

### Solutions

Provide a portable home or hospital unit into which patient urinates as urge occurs and records active time and amounts into a cached data file during each nightly/daily recording period. Said unit will also manage network access such as may be available so as to upload cached data files to the system server under private patient ID which in turn is referenced only by the matching ID provided by the ordering provider to whom resulting analyses may be delivered as needed.

The individual unit may also be valuable in hospital setting to deal nicely with the need to note and record when a post surgery patient first urinates. This would only require the unit upload to a hospital facility, possibly only as far as a Nurses station. This implementation would, of course, be a quick and easy business starting point.

### Project Outline

The business is comprised of individual units distributed to patients, an servers provisioned to receive data uploaded from the patient units, as well as programs to analyze such data as required.

- Take note of patient participation compliance and deliver schedule reminders and progress reports as ordered.
  - Store and validate collected data to ensure system integrity.
  - Analyze collected data to identify statistical and possibly indicating rates, sequences, times etc.
    1. Time of each collection added
    2. Total aggregate collection amount
    3. Number of current event (enabling separate stop/start sequence during each nocturia event)
    4. Aggregate amount changes on each sample record allows ml/sec rate calculation and graphing
    5. Any time dwells between collection entries represent stop/start activities. These record dwells can identify both seconds between dribbles and minutes between significant flows which may indicate different prognoses.
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## PARVENU SYSTEMS

### Possible Representation Products

Various narrative and graphical reports may be generated as desired by ordering provider, including

- Date range of collection
- Time range of daily/nightly collection
- Number and time start/range of events
- Rates of flow during each event sequence
- Total collection for each event and day/night period
- Min/Max values for ml/sec rate, time between events, time dwell in start/stop sequences

### Possible diagnostic hints

With urology specialist knowledge base it is possible that the resulting data could indicate certain causal conditions.

- Multiple nightly events combine with relatively high total volume collected (~2L) has been described as Textbook indication a sleep apnea caused nocturia.
- Events beginning with good flow then dwell over some minutes followed by more good flow may indicate kidney or kidney to bladder conduit conditions?

### Next steps

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