Human and Social Development Office Sectors Group

Case studies to stimulate cross-learning on Digital Health Financing

Estonia, Indonesia & South Korea

Webinar | April 2024

Enhancing National Health Financing through digital technologies:

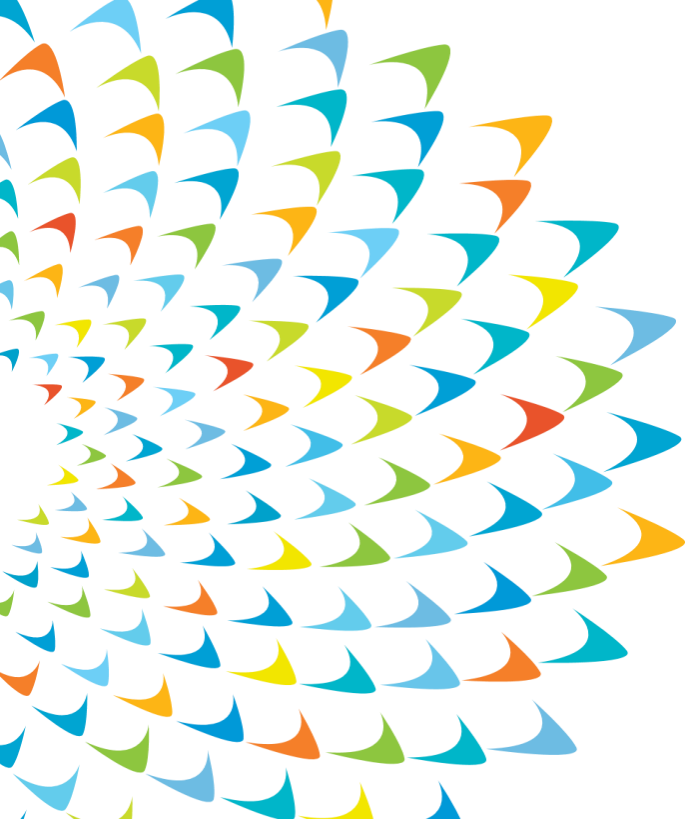**Innovations and lessons from Asia and the Pacific region**
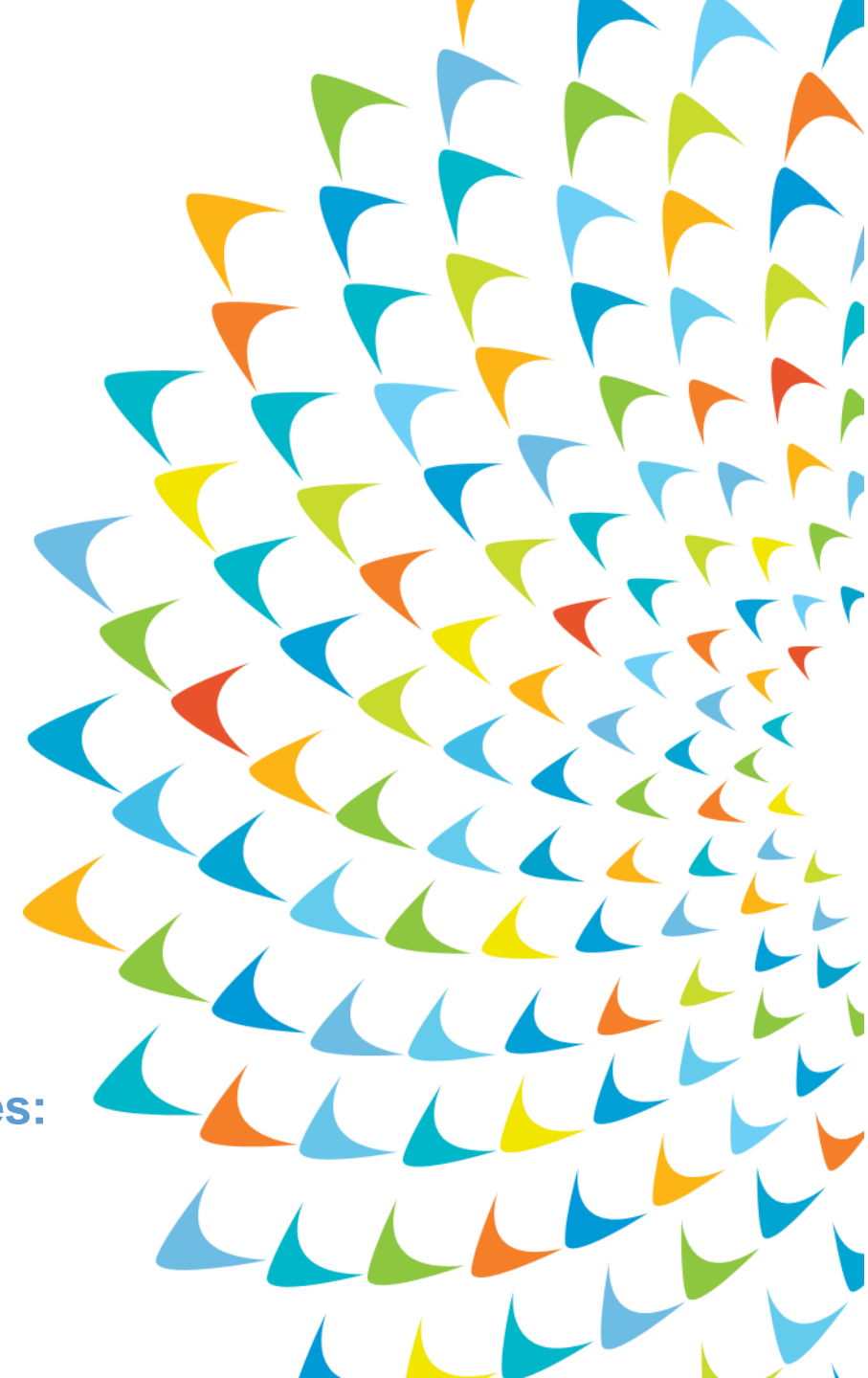
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Estonia's seamless transition to digital invoicing

Digital invoicing along with transformative technologies, such as e-channel, automates controls to ensure accuracy & compliance

Challenges

Administrative workload

Managing large volume of claims requires significant human effort & resources, leading to inefficiencies and delays

Processing errors

Errors during claims processing, result in incorrect payments & financial losses, leading to dissatisfaction among patients & providers

Delays in reimbursement

Delays in processing claims, affecting timely reimbursements to providers, impact efficiency of service delivery

ADB

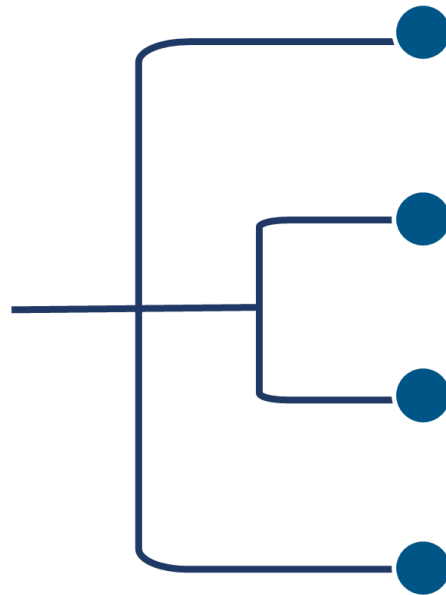# Estonia's seamless transition to digital invoicing

Adopting digital invoicing & e-channel within EHIF, has yielded advantages for claims processing

Intervention

Digital health invoicing & e-channel
- Creates summary invoices for non-case specific payments
- Reduces administrative burden

- Machine learning improves fraud detection & expedites payment processing
- Automated real-time monitoring of contract execution, ensuring compliance
- Interactive Power BI dashboards monitor reimbursements & deviations
- ML models predict & stratify patients' risks to avoid acute illnesses
- Secure internet-based transmission via robust data exchange through Xtee
- EHIS: Hosts central registers & databases e.g., hospitals, family doctors
- AI enhances e-channel claims processes creating efficiency & accuracy

Impact

Efficiency & accuracy
Reduced manual intervention & TAT of claims processes

Cost savings
Minimizing administrative overheads

Real-time monitoring
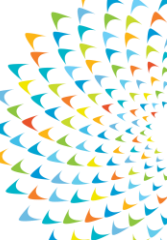Power BI for real-time monitoring & correction

Fraud detection
ML algorithms for automated verification to detect predefined errors & fraud patterns

Transparency & accountability
Access to real-time contract information & performance metrics

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Mobile JKN transformed health financing system by enhancing service delivery & user experience

Unified platform providing access to health information/ services & reducing administrative burden

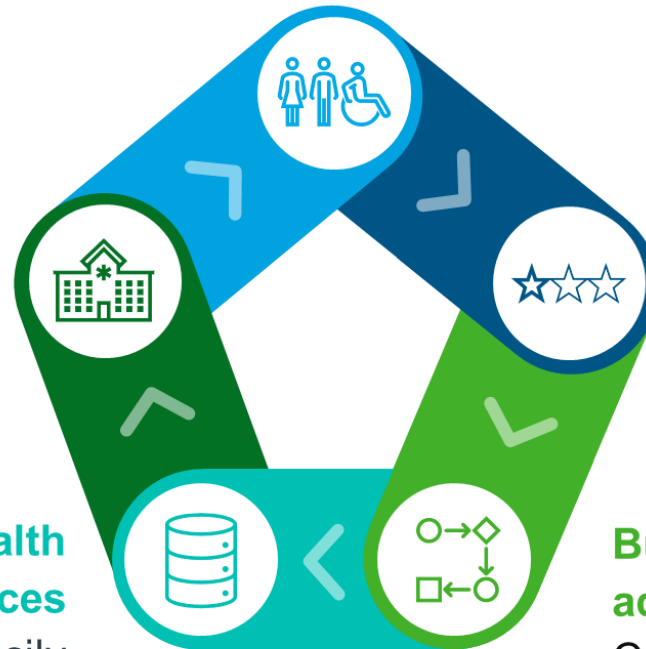**Challenges**

Long queues at BPJS Kesehatan offices
High daily footfall of ~ 300,000 people leads to long waiting times, causing inconvenience to patients

Strained service delivery
High demand for services can put strain on system, potentially compromising quality & timeliness of service delivery

Decline in satisfaction (2014: 81% | 2016: 78.6%)
Indicates decrease in user contentment with the services provided

Limited access to health information & services
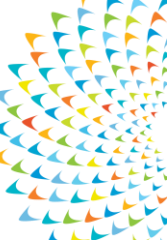The lack of comprehensive & easily accessible health information can hinder users from making informed decisions

Burdensome administrative procedures
Complex & time-consuming administrative processes can deter users from accessing services efficiently
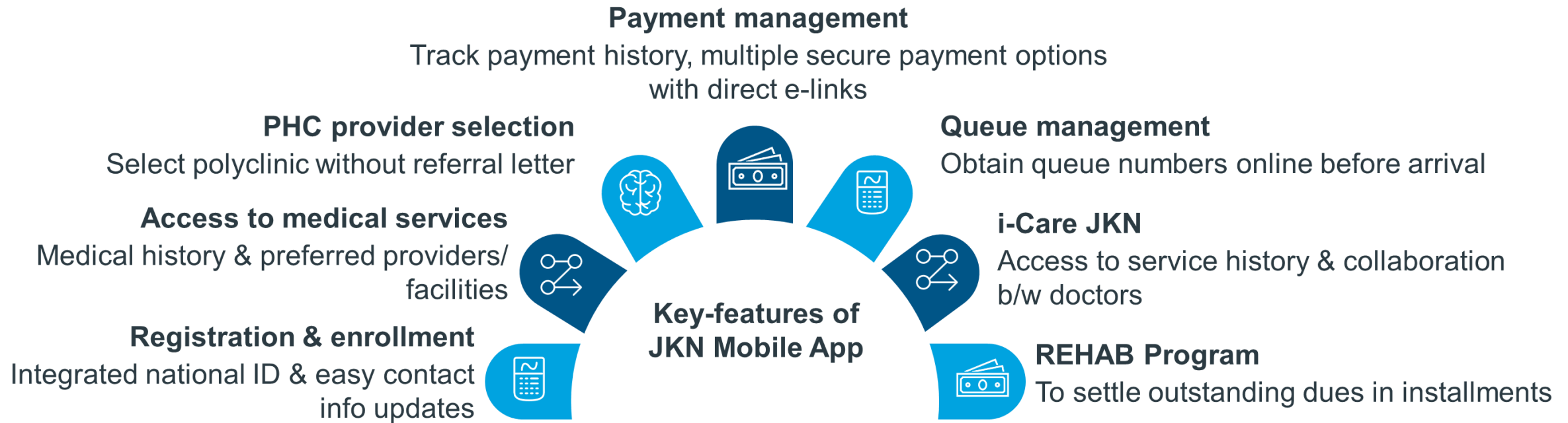
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Mobile JKN transformed health financing system by enhancing service delivery & user experience

Mobile JKN app enhanced access to services & enhanced user experience

Intervention

Key-features of JKN Mobile App

Payment management
Track payment history, multiple secure payment options with direct e-links

PHC provider selection
Select polyclinic without referral letter

Queue management
Obtain queue numbers online before arrival

Access to medical services
Medical history & preferred providers/facilities

i-Care JKN
Access to service history & collaboration b/w doctors

Registration & enrollment
Integrated national ID & easy contact info updates

REHAB Program
To settle outstanding dues in installments

Impact

Reduced crowding
Significant decrease (68.5%) in number of users visiting BPJS office, reducing waiting queues

User satisfaction
Increased from:
2016: 78.6%
2017: 79.5%

Service availability
Multiple features added increasing service utilization

Complaint resolution
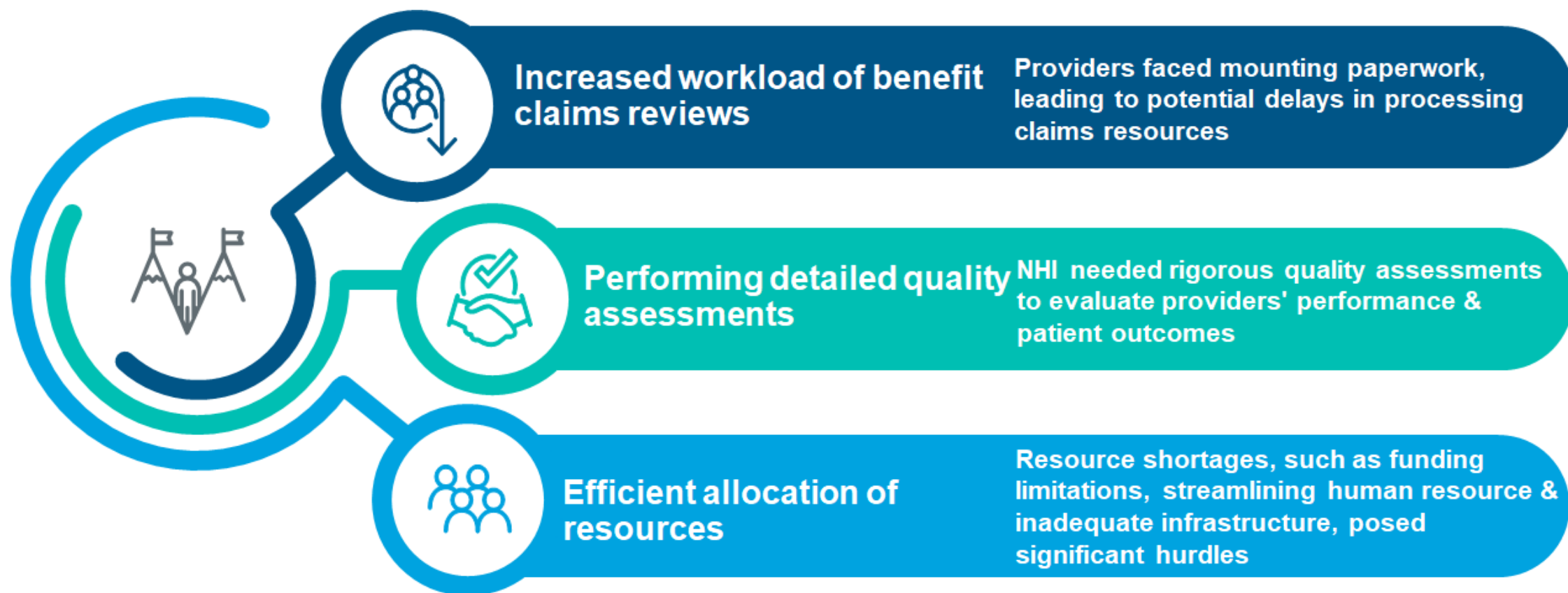TAT for user complaints within 5 working days

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Role & impact of HIRA's digital technologies on efficiency & quality of health financing and health service delivery
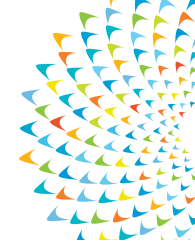
ICT defines scopes & standards of services, effectively oversees resources & evaluates both cost & quality of services

Challenges

Increased workload of benefit claims reviews

Providers faced mounting paperwork, leading to potential delays in processing claims resources

Performing detailed quality assessments

NHI needed rigorous quality assessments to evaluate providers' performance & patient outcomes

Efficient allocation of resources

Resource shortages, such as funding limitations, streamlining human resource & inadequate infrastructure, posed significant hurdles

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Role & impact of HIRA's digital technologies on efficiency & quality of health financing and health service delivery

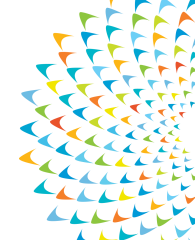*HIRA ICT system has been instrumental in streamlining benefit claims review, assessment, & resource management, improving patient care outcomes*

Intervention

Healthcare Data Acquisition System
Collects data from providers, utilizing digital authentication & encryption

Health Data Review & Assessment System
Determines reimbursement amounts, saving ~ USD 1.25 billion annually

Korea Pharmaceutical Information System
Optimizes drug distribution by assigning standardized codes

Healthcare Big Data System
Leverages data resources to generate precise statistics

Provider Integrated Profiling System
Aids in reallocation of resources & oversees 96,253 providers

Drug Utilization Review System
Assessment of prescription data |rapid alerts to doctors (0.5 sec)

Impact

Streamlined benefit claims review	Seamless service delivery	Enhanced quality assessments	Efficient resource allocation	Adept responses to emergency public health challenges
Reduces manual labor & administrative burden	Providers submite-claims, access real-time reviews	Consistent & reliable assessment results	Optimal utilization of resources, promotes equitable access, & enhances system efficiency	Evidence-based decision making & implementing measures

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**Human and Social Development Office
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Thank You

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