CNIO 2.0: What's Next for Nursing IT Leaders

A Witt/Kieffer Survey Report

September 2016

How clinical information is turned into practical knowledge, as informatics, is a critical concern throughout the continuum of care. Increasingly, the chief nursing informatics officer (CNIO) plays a dual role in improving outcomes. The CNIO combines traditional frontline care duties with innovative evidence-based processes and practices that are applicable to nurses and, by extension, all caregivers.

The unique sensibilities and abilities of today's CNIO can guide organizations in creating IT solutions that can maximize nursing productivity and work for the patient. As the primary liaison between IT and nursing, the CNIO can help strategically identify, apply, and oversee all necessary resources: time, financial, and human. Because CNIOs are central to the success of today's healthcare organizations, Witt/Kieffer recently surveyed these executives and their peers about the responsibilities, reporting relationships, and skills required of the position.

The following report provides results of this survey as well as a detailed view of the expanding requirements and experiences that healthcare organizations should consider when recruiting nursing IT leaders. And it identifies the ways organizations with a strong CNIO can prepare for the healthcare challenges of tomorrow.
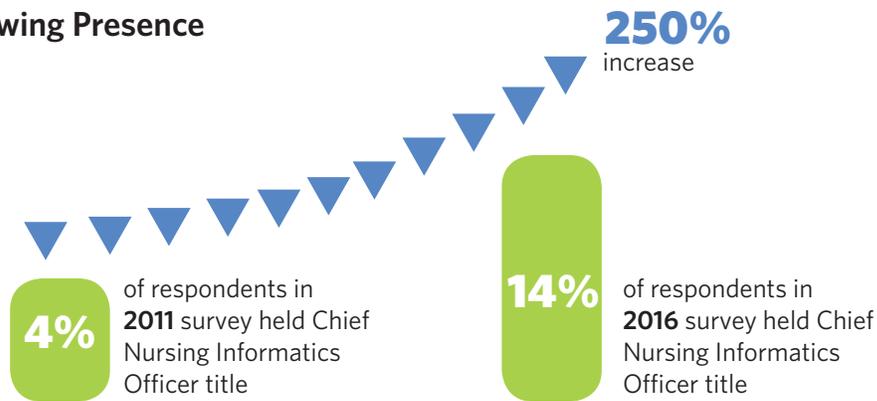
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Leaders Connecting Leaders

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Survey Respondents and Methodology

In 2016, Witt/Kieffer sent an online survey to Chief Nursing Informatics Officers (CNIOs), Chief Nursing Officers (CNOs), Chief Information Officers (CIOs), Chief Medical Informatics Officers (CMIOs), and other senior healthcare provider leaders. One hundred of these leaders, mostly from large academic medical centers, integrated delivery systems, and system hospitals, shared their responses and comments.

Several questions mirrored those asked in a survey in 2011 to show trends over time in the evolution of the CNIO role, title, and expanding responsibilities.

A Growing Presence

250%
increase

4% of respondents in **2011** survey held Chief Nursing Informatics Officer title

14% of respondents in **2016** survey held Chief Nursing Informatics Officer title

Organizations Represented

Other, 1%

Academic Medical Center, 16%

Independent Hospital, 21%

System Hospital, 23%

Integrated Delivery System, 38%
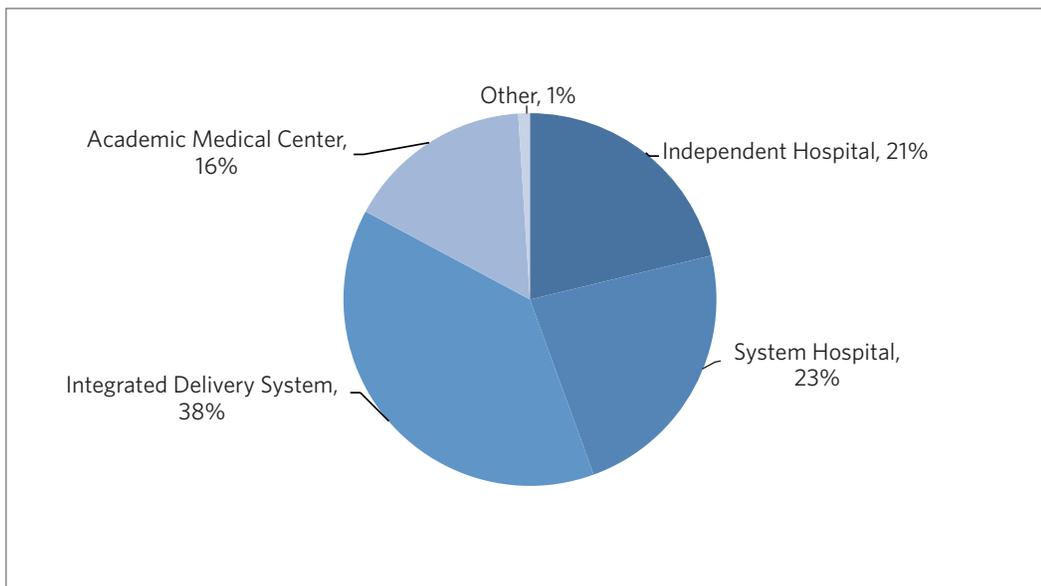
A Look at the Data

Survey data indicate the number of providers with a CNIO or equivalent in place, hiring plans, reasons for not having a CNIO, reporting structure, top responsibilities and skills, compensation, and top challenges. (The 2016 survey also found that two-thirds of the organizations were at stage 6 or 7 on the 7-point HIMSS Analytics Electronic Medical Record Adoption Model.)
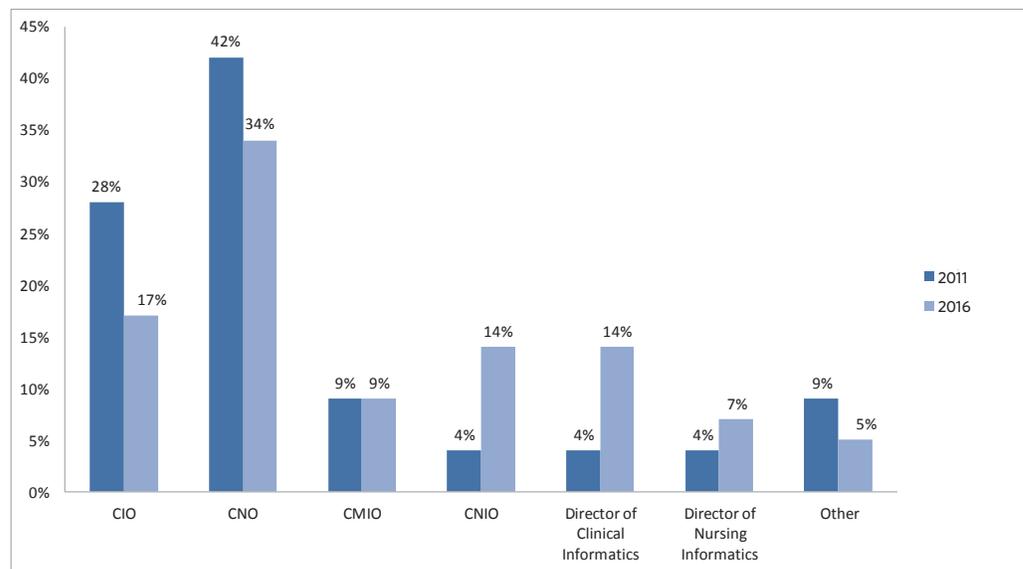
Many respondents went beyond the structured survey questions to share personal views on their organizations' practices with the role. Some of their thought-provoking comments are included in the margins of this report.

Respondents' Titles, 2016 and 2011

> While there is no 'plan,' we are making the case for the role.

> **There's a lack of understanding about the role informatics plays with point of care planning and technology adoption**. We recently formed a clinical informatics department and now have a manager role that is slowly growing in scope.
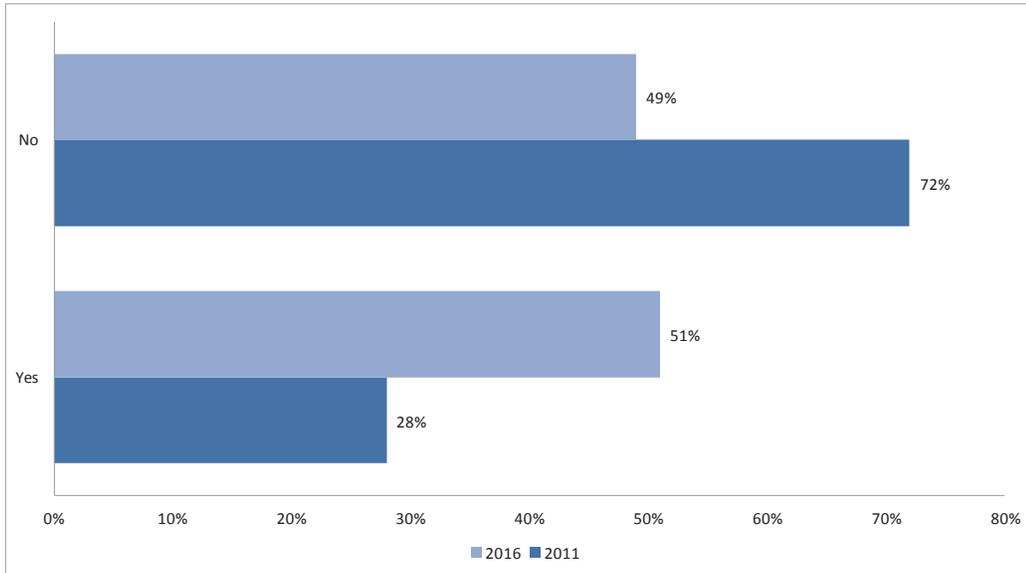
The prevalence of the title "Chief Nursing Informatics Officer" shared the greatest growth with "Director of Clinical Informatics." Each grew from a mere 4% of respondents in 2011 to 14% in 2016. Considering the fact that "clinical" comprises the nursing function, the informatics role is gaining recognition while making its way into the C-suite. Most "other" titles shared by respondents in 2016 were variations with "informatics," "nursing," and "clinical." A few nursing IT leader titles with "medical" persist. Notably, the title "Chief Nursing Information Officer" made the 2016 "others" list. This indicates a growing perception that the role extends beyond nursing informatics and into the broader corporate realm. Indeed, the role supports all providers and patients in their decision-making through all settings.

Providers with CNIOs or Equivalent, 2016 and 2011

> **We have a CMIO reporting to our CMO.** My role as Director of Clinical Informatics has a matrix report to our Sr. VP CNO and CMIO, with the goal of interdisciplinary collaboration.

About half of 2016 respondents said their organizations have a CNIO in place, compared to 28% in 2011 – an 82% increase. The vast majority in 2016 said the responsibilities are considered part of the existing medical or nursing management functions, either with individuals such as a CMIO, Chief Nursing Officer (CNO), lower level informatics personnel, or teams from medical, nursing, and IT departments. Others indicated the role was at least on the corporate radar, with restructuring underway to accommodate addition of a CNIO. Negative comments on prospects for a CNIO pointed to lack of local resources or commitment to innovation.

CNIO Hiring Plans, 2016 and 2011

> We are trying to figure out if all informatics should be combined under the CMIO.
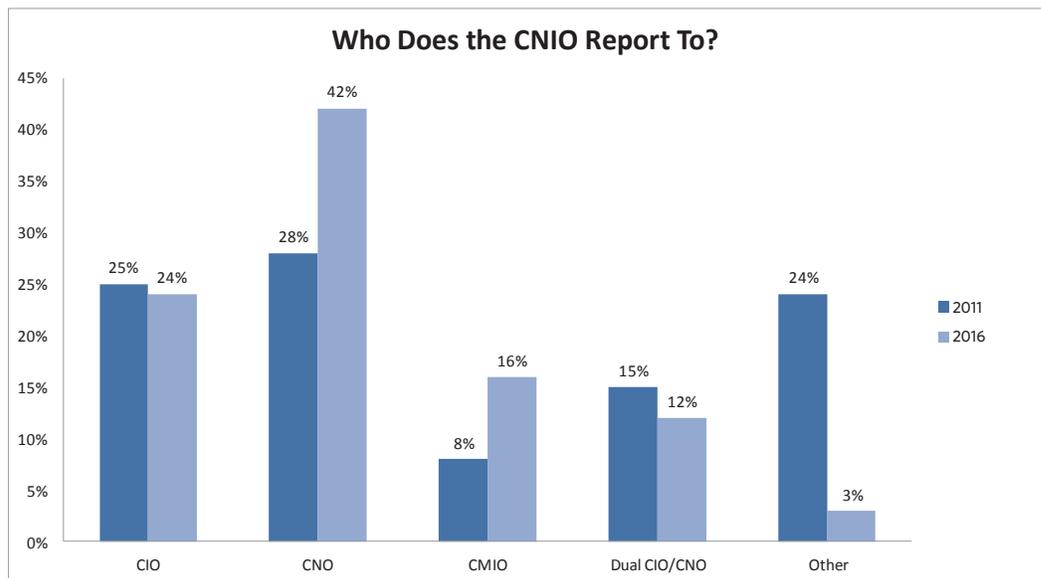
> **"**
>
> Unfortunately, we look at software applications as projects that are completed, so it is difficult for the organization to understand that the IT projects require continued maintenance.
>
> **"**

Following up on the preceding question, three-fourths of respondents in 2016 said their organizations did not plan to hire a CNIO in the next 12 to 24 months. However, they explained in comments that either a CNIO already was in place or that initial exploration of the role was underway. Most importantly, the same question in 2011 was answered affirmatively by only 17%, so the 24% "yes" response rate in 2016 indicates a noteworthy increase.

Reporting Relationships, 2016 and 2011

Who Does the CNIO Report To?

	CIO	CNO	CMIO	Dual CIO/CNO	Other
2011	25%	28%	8%	15%	24%
2016	24%	42%	16%	12%	3%

As if to emphasize the emerging aspect of this nursing IT role, 42% of respondents in 2016 said the CNIO reports to the CNO. This left CIO with 24%, CMIO with 16%, dual CIO/CNO with 12%, and CEO and Chief Medical Officer (CMO) among others with 3% total. In 2011, many more respondents selected the "other" option. Because the role was not at the "C" level, the reporting structure was "matrixed" among "C" leadership or connected to the top with a "dotted line." While that's still often the reality, there seems to be less ambiguity now.

Other Bosses, 2016

- IT Administrative Director
- CHIO
- VP of Nursing
- Assistant Deputy Under Secretary of Health for Informatics and Analytics, with a dotted line to the CNO
- System Chief Nurse Executive
- Senior Director of Adoption and Sustainment for Applied Clinical Informatics
- System CNIO
- VP for Organizational Performance

Responsibilities and Skills

Top Responsibilities

What does a CNIO do? Judging from the 2016 survey responses, organizations with the position in place mainly expect CNIOs to handle nursing strategy as it relates to IT, and vice versa. It's no surprise that this is a strategic role. What's interesting is that some organizations emphasize nursing while others emphasize technology. Either way, collaboration with the CMIO is very important (69%) and a prerequisite for the main tasks at hand for a CNIO: implementation of EHR and clinical system as well as optimization (78%) and schooling the organization on those nursing-technology projects to be implemented and optimized (68%).

78%..... EMR and clinical IT system implementation and optimization

78%..... Nursing strategy as it relates to ITVP of Nursing

76%..... IT strategy as it relates to nursing

69%..... Direct day-to-day collaboration with CMIO on clinical IT matters

68%..... Education of organization regarding technology-related nursing

59%..... Oversight and training of nurses & nursing informatics team

37%..... Day to day project management

36%..... Budgeting and resource allocation for clinical IT systems

Other responsibilities include:

- Change management and collaboration with multiple department directors

- IT strategy as it relates to organizational strategy and goals

- IT strategy as it relates to all clinical disciplines

- Administrative management of Patient Services

- Meaningful use

- Mentoring

These responsibilities combine to create a powerful force for ensuring user acceptance and the adoption of EHR as well as other emerging technologies. In effect, the CNIO bridges the organizational interests of nursing and technology.

> Ours is a medically dominated culture that is evolving to interprofessional.

> We need to prioritize work, gaining consensus across a system, maximizing productivity while implementing new automation and speed of change that clinicians can accept.

Top Skills Required

Respondents in 2016 were asked to select all that apply from a list of 11 skills that could be considered success factors for the CNIO job. The clear favorite was collaboration and consensus building (selected by 72% as "essential"). With the role often matrixed across clinical and medical departments and connected by dotted lines to various supervisors, that choice was expected.

> Amongst a small but growing group, the role is understood.

> It's taken some time, but now there is respect as the role and contributions are understood.

Essential

Collaboration and consensus building

Knowledge of nursing informatics

Problem solving and conflict resolution

Emotional intelligence

People management

Team development

Very Important

Vision and creativity

IT system implementation

Business and finance

Important

Nursing

Process improvement (Six Sigma)

Change management certification/expertise

EHR

Other top essentials were communications (65%), knowledge of nursing informatics (62%), problem solving and conflict resolution (58%), emotional intelligence (56%), people management (52%), and team development (48%). Considered "very important" skills were vision and creativity (39%), IT system implementation (38%), and business and finance (37%). Generally, people skills were judged to be at least as vital to success as technical, financial, or project management skills.

Respect and Understanding

Is the role of the CNIO understood and respected within your organization?

43% YES

57% NO

While they are reasonable expectations in an interprofessional environment, respect and understanding can be elusive to nursing information leaders. It's disappointing to see 57% of respondents in 2016 answer "no" to the question "Is the role of the CNIO understood and respected within your organization?" Fortunately, nurses are teachers as well as caregivers. They focus on the opportunity to explain the importance of the role, and they figure out how to accomplish their goals. From greater understanding, it is hoped, respect will follow.

> We must define the role of the CNIO and the impact it can make in adopting a safe technological environment.
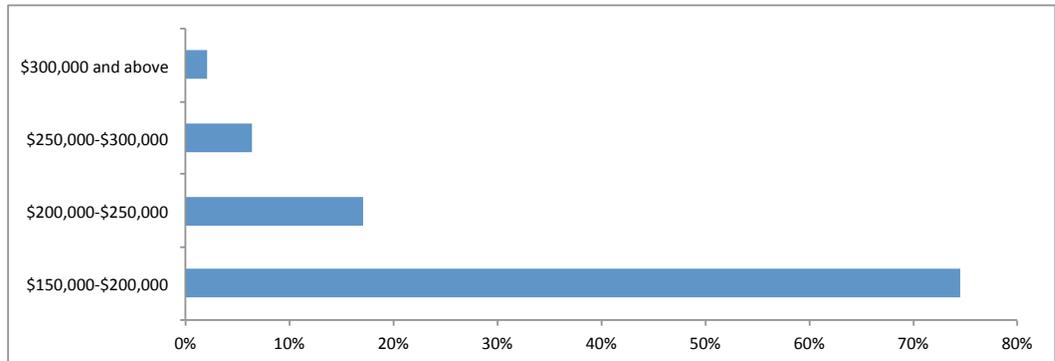
> Constituents' misunderstanding of information technology strategy and informatics is a top challenge for us.

Compensation

Bar chart of CNIO compensation ranges:
- $300,000 and above: ~2%
- $250,000-$300,000: ~6%
- $200,000-$250,000: ~17%
- $150,000-$200,000: ~74%

> We have a physician lead as CMIO. She believes she and the CIO represent the voice of clinicians.

Organizations appear to be getting a bargain with CNIOs in salary and compensation. According to 2016 survey respondents, 74% are paid between $150,000 and $200,000. (Four respondents without the CNIO title reported that the compensation actually fell under that range.) From $200,000 up, the percentages dropped precipitously. Organizations that are committed to successful informatics initiatives will need to review their compensation packages for CNIOs. In order to attract and keep the best talent for this role, parity with similar IT and medical leadership positions will be needed. Simple parity with similar nursing leadership positions may not be enough, considering the multi-disciplinary reach of the CNIO.

> We get good support from executive leadership, though still no seat at the executive table. However, I exert influence through the CIO and CNO.

Additional Thoughts, 2016

"Often the role is associated with the Electronic Health Record only when there are many other areas of opportunity, such as nurse call systems, phones, beds, smart pumps, etc."

Some organizations think the CMIO suffices, but there are many clinicians outside the medical world."

"Technology is not the solution, it is a tool. If you don't have a good workflow and do have compliance challenges, they will still be there post-implementation. CNIOs can make it easier to do the right thing, but they cannot force anyone to do it."

"This emerging role, if managed correctly, can go a long way to providing tools and processes that would enhance patient safety; boost nursing, patient, and physician satisfaction; and improve nursing retention."

"It is an essential role to ensure that the driver of technology is the context of care and not the technology itself."

"This is a new role for us in the past two years. It's turning out to be very important as nursing practice gets more and more complex."

"A Seat at the Table"

The CNIO role first gained recognition as a discipline in 1992 from the American Nursing Association, years after the term "informatics" was applied to the transformation of clinical information into knowledge. Today, CNIOs are establishing credibility and finally getting their due. They are gaining a seat at the table alongside CMIOs and CIOs. At one system featured in the 2016 survey, CNIOs are participating in the:

- Technology Value Analysis Committee

- Strategic Planning and Growth Committee

- Executive Councils

- President's Technology Council

- Clinical Governance

They are also taking on external leadership roles at a number of task forces at HIMSS and other professional organizations. They are teaching in academia and serving on advisory boards. They are raising their profiles.

Looking Ahead

While full recognition remains elusive, many survey respondents seem optimistic that resistance will fade as corporate understanding of clinical IT responsibilities increases.

How will this understanding increase? Through collaboration. Savvy CNIOs will form strong partnerships with the CMIO, CIO, and other IT leaders. Together they can balance the need for rapid cycle optimization and aggressive growth with the constraints of limited resources. They can teach top leadership about the long-term commitment required to introduce and maintain an EHR system – which is just one aspect of informatics, along with other emerging healthcare technologies. They can address the challenges brought on with the environmental shift from inpatient to ambulatory care.

As this transformation accelerates, nurses with technical training and experience will become highly valued by forward-looking healthcare providers. They will be heard both as the voice of nursing for IT and the voice of IT within nursing.

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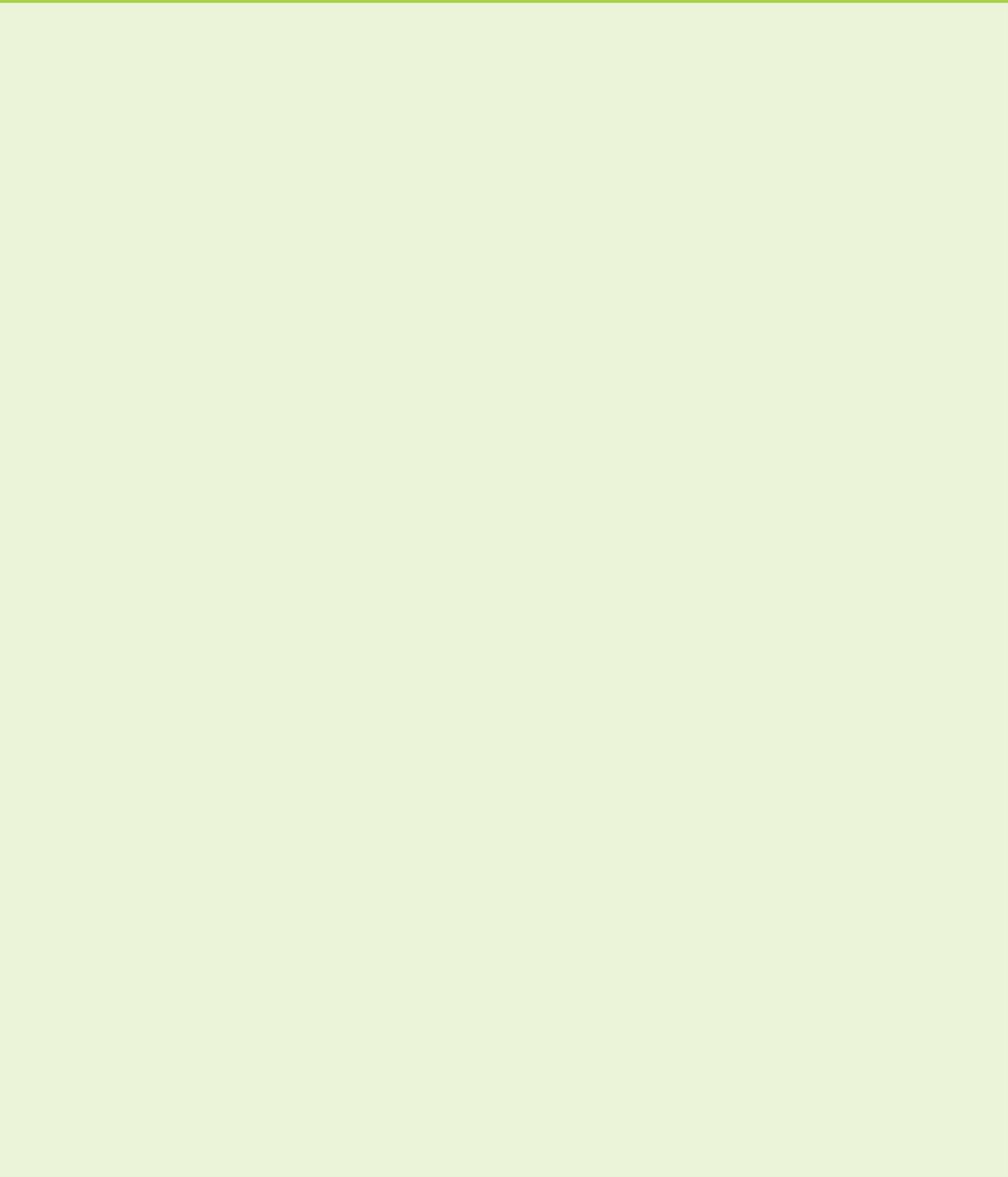
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